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June 25, 2001

California Regional Water Quality Control Board
Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013
ATTN: Steven Hariri

RE: Work Plan for Soil Closure
Jervis B. Webb of California Facility
South Gate, CA
IT Corporation Project No. 828208

Dear Mr. Hariri:

As we discussed in our May 31, 2001 meeting with you, I am transmitting two (2) copies of our *Work Plan for Soil Closure* for the Jervis B. Webb of California site in South Gate, CA. Following your agency's review and approval of the Work Plan, we can schedule the field work to commence within 7 days.

Please feel free to call me direct at (949) 660-7511 with any questions or comments on our Work Plan.

Sincerely,
IT Corporation

Gary Cronk

Gary Cronk , P.E.
Project Manager

Encl. Work Plan for Soil Closure

2001 JUN 26 A 9:40

IT CORPORATION
A Member of The IT Group

WORK PLAN FOR SOIL CLOSURE
FOR
5030 FIRESTONE BOULEVARD AND 9301 RAYO AVE.
SOUTH GATE, CALIFORNIA

PREPARED FOR:

JERVIS B. WEBB COMPANY OF CALIFORNIA

PREPARED BY:
IT CORPORATION
3347 MICHELSON DRIVE, SUITE 200
IRVINE, CA 92612-1692

JUNE 25, 2001

IT CORPORATION PROJECT NUMBER: 828208

WORK PLAN FOR SOIL CLOSURE
FOR
5030 FIRESTONE BOULEVARD AND 9301 RAYO AVE.
SOUTH GATE, CALIFORNIA

Prepared By:

Gary Cronk

Gary Cronk, P.E.

IT Corporation

Project Manger

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1.0 Introduction

1.1 Purpose

The primary objective of this Work Plan is to describe IT Corporation's approach for sampling of confirmation soil borings at the Jervis B. Webb Company of California (Webb of California) site and to demonstrate that the subject property may now be considered for site closure.

1.2 Site Description

The Webb of California properties are located at 5030 Firestone Boulevard and 9301 Rayo Avenue in the City of South Gate, California. A site location map is included as Figure 1. The Webb-Firestone property (the site) occupies about 1.4 acres. This site is bounded on the north by Firestone Boulevard and on the south by Reliable Steel, Incorporated. Piazza Trucking (formerly Laidlaw) lies to the immediate east of the Webb site. To the west is a 50-foot wide Union Pacific Railroad easement.

The Webb-Firestone property includes a 20,000 square foot, steel-framed building with corrugated steel siding. The building is surrounded by asphalt and concrete paving except for a planter on the north side of the building. A five-foot wide rail spur enters the subject property from the northwest and extends along the west side to a 10,000 square foot, steel-framed open bay on the Reliable Steel property to the south. Along the entire western portion of the property is a 35- foot wide Los Angeles County Flood Control easement that contains a large underground storm drain. Another storm drain runs along the north side of the property along Firestone Boulevard. A sanitary sewer pipeline extends across the eastern side of the Webb-Firestone property to another sewer line in Rayo Avenue (south of the Reliable Steel property).

1.3 Site History

Webb of California manufactured conveyor belt systems at the Rayo property (now the Reliable Steel property) from the middle 1950s to early 1996. The Firestone property was purchased by Webb of California in 1975 from Spear Industries. Blake Rivet Company (Blake), an aircraft rivet manufacturer, which had been leasing the property prior to Webb's purchase, continued to lease the property until approximately 1981. Blake used an above ground anodizer as part of its rivet manufacturing operation. Wastewater from the anodizer was collected in floor trenches where it was directed to a three-staged clarifier made of concrete. The clarifier was located just to the south of the southern wall of the Firestone property building (see Figure 1) until it was removed in November 1996. The clarifier reportedly discharged into the local sewer system.

After Blake's departure, Webb of California used the Firestone property primarily for storage of metal stock that was used at the adjacent Webb Rayo conveyor facility until it was purchased by Reliable Steel in 1997.

1.4 Surrounding Land Use

The area surrounding the site includes a mixture of commercial and industrial uses. Figure 2 shows the spatial relationship of the site to other properties in the neighborhood. Adjacent facilities within a 1/2-mile radius include the following:

- North – Across Firestone Boulevard there are primarily industrial, commercial, and manufacturing facilities. These include the following:
    1. DSL Transportation Service at 5011 Firestone Place (north side of street).
    2. A public storage facility located west of the DSL facility.
    3. Engine Parts and Machine, Inc. at 5036 Firestone Place (south side of street).
    4. All Springs (a spring manufacturer) at 5035 Firestone Place (north side of street).
    5. Ace Rubber, Inc. at 5044 Firestone Place (south side of street).
    6. Gateway Business Forms, Inc. at 5101 Firestone Place (north side of street) and 5110 and 5120 Firestone Place (south side).
    7. Label Craft, Inc. at 5140 Firestone Place (south side of street).
    8. AVCO Truck Parts and Oil Supply at 5200 Firestone Place (south side of street).
    9. Interagency Reposers Towing at 5202 Firestone Place (south side of street).
    10. Arnco Chemical at 5141 Firestone Place (north side of street).
    11. Schultz Steel Company at 5321 Firestone Boulevard (north side of street adjacent to the west bank of the channeled Los Angeles River). Schultz Steel is also located at 5311 Reisner Way and 8621 Rayo Avenue on the west side.
    12. Reisner Metals, Inc. at 5225 Firestone Place (north side of street).
    13. ISM Air Nail Company at 5335 Reisner Way (north side of street and adjacent to the Los Angeles River).
    14. Armstrong World Ind. Inc. at 5037 Patata Street in the City of Bell, California.

- East – Adjacent to the subject site is Piazza Trucking (#15 and #16 on Figure 1A). Directly across Rayo Avenue is Pacer International (#17) at 9300 Rayo Avenue. Further to the east lies the Los Angeles River and the Interstate 710 Freeway.
- South – Directly south of the subject site is Reliable Steel, Inc. (#18) and Union Pacific Railroad tracks. Beyond the tracks, is Purex Rubbish Disposal Company (#19, a solid waste landfill site) at 9400 S. Rayo Avenue. Across the tracks and to the east of Purex is

the California Alabama Pipe Company (#20). Beyond the pipe company is the Los Angeles River.

- West – Directly west of the subject site is Union Pacific Railroad tracks. Beyond the tracks, is McLeod Metals (#21) at 8980 Kendall Avenue and 9309 Rayo Avenue. West of McLeod Metals is Cooper Drum Company (#22) at 9316 Atlantic Avenue. North of McLeod Metals is United Ready Mix Concrete (#23) at 4988 Firestone Boulevard. Further west along the south side of Firestone Boulevard to Atlantic Avenue, there are several small establishments including a paint store, motel and Jack-in-the-Box restaurant.

1.5 Regulatory Database Review

The Dragun Corporation of Farmington Hills, Michigan, contracted Vista Information Solutions, Inc. (VISI) to complete an environmental database search of California State and Federal databases for the subject property and surrounding area. An electronic copy was provided to us for review. The VISI report is presented in Appendix A. The search radius for each specific State or Federal database meets the search radius stipulated by the American Society for Testing and Materials (ASTM) *Standard Practice for Environmental Site Assessment: Phase I Environmental Site Assessments: E 1527-97* (ASTM E 1527-97). The search included 17 standard environmental databases. The subject property was listed in 3 of the 17 databases (RCRA large generator, CA State Spills and CERCLIS databases. The following are the databases listing the subject and surrounding properties with the dates of the last database update and radius of search:

- National Priority List (NPL), December 2000 *(1 mile)*
- Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS), February 2000 *(1/2 mile)*
- CERCLIS No Further Remedial Action Planned (NFRAP), December 2000, *(1/2 mile)*
- California CERCLIS Equivalent List (CalSites), October 2000, *(1mile)*
- California Leaking Underground Storage Tank List (LUST), October 2000, *(1/2 mile)*
- California Underground Storage Tank List (UST), October 1994, *(1/4 mile)*
- Emergency Response Notification System (ERNS), December 1999, *(1/8 mile)*
- Resource Conservation and Recovery Information System – RCRA Small Quantity Generators (RCRIS_SQG), June 2000, *(1/8 mile)*
- Resource Conservation and Recovery Information System – RCRA Large Quantity Generators (RCRIS_LQG), June 2000, *(1/8 mile)*
- RCRA Treatment, Disposal and Treatment Sites (RCRIS TSDC), June 2000, *(1/2 to1 mile)*
- Solid Waste Facilities/Landfill Sites (SWF/LF), January 2001, *(1/2 mile)*

- California Regional Water Quality Control Board, Region 4 SLIC list (State Spills List), November 2000, *(1/8 mile)*

A review of the above State and Federal databases indicated that 45 sites are listed within the established search distances of the subject site. Fifteen (15) of the listed sites are hazardous waste generators (RCRA large and small quantity generators), while 17 sites appear on the list of known leaking underground storage tanks (LUST), four sites appear on the solid waste landfill list, and one site is a proposed NPL site (Copper Drum Co. site). Those sites nearest to the subject site are summarized in the table below. The entire VISI Environmental Database Report is provided as Appendix A.

Hazardous Materials Sites Situated Closest to Jervis B. Webb Property

Facility Name	Facility Address	Databases Used	Distance/Direction from Site
DSL Transportation Service	5011 Firestone Place, South Gate, CA 90280	RCRA SQG	Less than 1/8 mile/Northwest
United Ready Mix Concrete	4988 Firestone Boulevard, South Gate, CA 90280	CA Registered UST	0.01 mile/West
Westling Roger Ink Company	5001 Firestone Boulevard, South Gate, CA 90280	NFRAP	0.01 mile/West-Northwest
Culwell Brothers, Inc.	4973 E. Firestone Boulevard, South Gate, CA 90280	RCRA SQG, CA Registered UST	0.03 mile/West-Northwest
Gateway Business Forms	5101 Firestone Place, South Gate, CA 90280	RCRA SQG	0.02 mile/East-Northeast
Arnco Chemical	5141 Firestone Place, South Gate, CA 90280	ERNS, toluene dyisocyanate	0.06 mile/Northeast
McLeod Metals	8980 Kendall Avenue, South Gate, CA 90280	NFRAP, LUST, UST	0.03 mile/West
Spann's Gear and Machine Company	4977 Branyon Avenue, South Gate, CA 90280	RCRA SQG	0.08 mile/West
Reisner Metals, Inc.	5225 Firestone Place, South Gate, CA 90280	CERCLIS, LUST, UST	0.13 mile/East-Northeast
Schultz Steel Company	5321 Firestone Boulevard, South Gate, CA 90280	UST	0.18 mile/East-Northeast

Facility Name	Facility Address	Databases Used	Distance/Direction from Site
Cooper Drum Company	9316 Atlantic Avenue, South Gate, CA 90280	EPA CERCLIS, CA CERCLIS, UST, NPL	0.21 mile/Southwest
Armstrong World Ind. Inc.	5037 Patata Street, Bell, CA 90201	LUST, CA Registered UST	0.24 mile/North
M. Stephens Manufacturing	4839 Patata Street, Bell, CA 90201	LUST	0.30 mile/Northwest
CALTRANS South Gate	710 FWY at Firestone Boulevard	State SWLF	0.32 mile/East
Smiser Truck Terminal	8610 S. Atlantic Avenue, South Gate, CA 90280	LUST	0.34 mile/Northwest
Matlack, Inc.	8332 Wilcox Avenue, Bell, CA 90201	LUST	0.37 mile/North
Alfa Mirrors, Inc.	4935 Cecilia Street, Bell, CA 90201	LUST	0.46 mile/North
Park Avenue School/Cudahy Dump	5220 Santa Ana Street, Cudahy, CA	State SPL, SWLF	0.49-0.66 mile/North-Northeast
System Disposal Service, Inc.	4841 Cecilia Street East, Bell, CA 90201	LUST	0.51 mile Northwest
Blake Rivet Company and Jervis B. Webb Co.	5030 Firestone Boulevard, South Gate, CA 90280	CERCLIS, State Spills List, RCRA SQG	Subject Site

1.6 Previous Investigations

Several prior investigations of the Webb of California site and vicinity were conducted between the summer of 1995 and spring of 2001. There were 18 reports prepared to document these investigations. The details of these investigations are discussed further in Section 2.

Erler and Kalinowski, Inc. (EKI) conducted the majority of the investigations during 1996 through 2000 and produced 16 reports (EKI: 1996, 1998a, 1998b, 1998c, 1998d, 1999a, 1999b, 1999c, 1999d, 1999e, 2000a, 2000b, 2000c, 2000d, 2000e and 2001). These reports included: one Phase I ESA, two Phase II ESAs, a well installation work plan and proposal, a quarterly monitoring work plan, a soil remediation work plan, eight quarterly groundwater monitoring reports, and a groundwater remediation work plan. The Dragun Corporation and IT Corporation prepared a report in May 2001 to further evaluate site conditions.

1.7 Site Topography

The Webb of California property is situated in an area of generally low relief with elevations ranging from about 107 feet above mean sea level at the northwest property corner to about 104 feet above mean sea level at the southeast property corner. The land surface slopes very gently to the south with a gradient of approximately 12 feet per mile. The site is located approximately ¼-mile west of the channeled Los Angeles River that flows due south. The Rio Hondo River flows into the Los Angeles River approximately 1.2 miles south.

1.8 Climatic Conditions

The climate of the Webb of California site is typical of southern California, with a rainy season from November through March followed by hot and dry conditions during the summer and fall months. The air temperatures are generally mild ranging from 35 to 95 degrees Fahrenheit (°F) with occasional 100 degree (°F) temperatures during August and September. The average annual precipitation in the Los Angeles Basin is approximately 12 to 20 inches.

1.9 Geology and Hydrogeology

The subject site lies at the eastern edge of the Central Groundwater Pressure Basin of the Coastal Plain Province of Los Angeles County, California (California Department of Water Resources (DWR), 1990). The Los Angeles Coastal Plain groundwater basin encompasses the Central, West Coast and Hollywood groundwater basins (California Regional Water Quality Control Board [RWQCB], 1994). Locally, the site lies within the Downey Plain. Water-bearing strata within the Downey Plain include Recent alluvium, the Lakewood formation, and the San Pedro formation. The Recent alluvium contains the Semi-perched aquifer, Bellflower aquiclude (an impermeable clay layer) and Gaspur aquifer. The Exposition and Gage aquifers are a part of the Lakewood Formation, whereas the Hollydale, Jefferson, Lynnwood, Silverado and Sunnyside aquifers are a part of the San Pedro Formation.

The Water Replenishment District of Southern California (WRDOSC, 2000) has subdivided the groundwater aquifers within the Central basin into six distinct groundwater zones based upon their depth and water quality characteristics. Several regional nested wells are sampled twice annually and provide the basis for the six groundwater zones. The WRDOSC wells nearest the subject site, are South Gate Well #1 located about one mile south of the Webb site and Downey Well #1 located about 3 miles to the southeast.

The six zones are numbered in decreasing order with number six being the shallowest zone. Average total dissolved solids (TDS) concentrations (in milligrams per liter) and TCE and PCE concentrations (in micrograms per liter) have been reported by WRDOSC for each groundwater zone. The water quality data from the six zones (based on July 1999 data) are tabulated below:

Zone	Aquifer Name	Screened Interval (feet)	TDS (mg/l)	TCE (ug/l)	PCE (ug/l)
6	Gaspur	90 to 110	760	2.5	ND
5	Exposition	250 to 270	430	ND	0.5
4	Hollydale/Jefferson	370 to 390	470	0.8	7.9
3	Silverado	580 to 600	430	ND	0.6
2	Silverado	940 to 960	390	ND	ND
1	Sunnyside	1,170 to 1,190	300	ND	ND

The total dissolved solids (TDS) concentrations decrease with depth indicating the inorganic water quality generally improves with depth. VOCs (PCE and TCE) have been detected in aquifers as deep as 600 feet below grade. Water in all 6 zones has been classified as calcium bicarbonate type water. The Los Angeles and Rio Hondo Rivers are sources of groundwater recharge for the shallow aquifers of the Central Basin.

The regional flow direction in the deeper aquifers beneath the site (Hollydale, Jefferson, Silverado and Sunnyside) is generally to the west, while the flow in the shallow aquifers (Gaspur and Exposition) is towards the south (WRDOSC, 2000). Water levels measured by EKI (1998b, 1999a and 2000e) beneath the site occur at approximately 59-60 feet above mean sea level (MSL). These measurements are consistent with the WRDOSC monitoring wells penetrating the Gaspur and Exposition aquifers, which have water levels ranging from 40 to 51 feet above MSL.

According to a DWR geologic cross section beneath the Downey Plain, the Gaspur aquifer is about 20 to 40 feet thick beneath the South Gate area and thins to the east as it approaches the Los Angeles River (DWR 1990). A 100 to 150-foot thick, impermeable layer, which corresponds with the Bellflower aquiclude, underlies the Gaspur aquifer. The WRDOSC (2000) indicates the Gaspur aquifer is not hydraulically connected to the deeper, drinking water producing aquifers (i.e., the Hollydale, Jefferson, Lynnwood, Silverado and Sunnyside aquifers).

1.9.1 Local Hydrogeologic Conditions

Figures 3 and 4 show the locations of 19 soil borings, five groundwater-monitoring wells and nine cone penetrometer test (CPT) locations investigated by EKI (1998a, 1999a and 2000e) to interpret the subsurface lithologic and hydrostratigraphic conditions beneath the subject site. Figure 3 also shows the locations of cross-section A-A' prepared by EKI (1998a and 2000e) and cross-section B-B' prepared by IT for this report.

Both geologic cross sections (Figures 4 and 5) indicate the subject site is underlain by unsaturated, unconsolidated and interbedded layers of silty sand (SM), well graded sand (SW), and silt (ml) to approximately 25 feet below ground surface (bgs). Both the soil boring logs and CPT data indicate that at approximately 25 feet bgs there is a continuous 2 to 5-foot thick layer of clay (CL). Beneath the clay layer, there are unsaturated, unconsolidated and interbedded layers of silty sand (SM), silt (ML) and well graded sand down to the water table at 43 to 46 feet bgs. The water table fluctuates by about 3 feet during seasonal high and low stands, according to EKI well measurements (Table 1). Below the water table are saturated interbedded layers of silt (ML), silty sand (SM), well graded sand (SW) and poorly graded sand (SP) to the total depth (73 feet bgs) explored by EKI.

1.9.2 Groundwater Flow Conditions

Table 1 summarizes the water table elevation data for the site (EKI, 2000e). Figure 7 is the groundwater contour map for the site based on measurements of November 5, 1998. The November 5, 1998 contour map is included in this report because it coincides with the most areally comprehensive groundwater sampling for the Site. This occurred during October/November 1998 when EKI collected groundwater samples from the push-in-place piezometers (PIPP) in the CPT borings during October 1998 and from the monitoring wells during November 1998. The groundwater flow direction, based on the November 5, 1998 data, is generally from north to south.

The November 5, 1998 groundwater contour map is generally representative of the groundwater flow conditions documented during the 28 other monitoring events conducted between February 1998 and March 2001. Groundwater contour maps for the 28 monitoring events are provided in Appendix B. The groundwater contour maps generated for each monitoring date indicate that although the groundwater flow direction has varied to a limited extent, groundwater flow at the Site during the period of investigation has consistently been from north to south. The north to south groundwater flow direction is consistent with more regional investigations. This indicates that the northern property boundary is consistently the upgradient property boundary and the

property boundaries to the west and east are sometimes upgradient. From the contaminant transport perspective, this indicates that chemicals in the groundwater would consistently move in the general direction from north to south.

The groundwater contour maps also show that the hydraulic gradient in the northern end of the Site near Firestone Boulevard is considerably higher than the hydraulic gradient in the southern portion of the Site. Two possible explanations for the change in hydraulic gradient are: (1) the transmissivity of the aquifer increases from north to south; and (2) there is a groundwater recharge source just north of the property boundary. At this time, there are insufficient data to determine which condition is responsible for the change in hydraulic gradient.

In summary, the water table at the Site occurs at approximately 45 feet bgs. The groundwater flow direction is predominantly north to south. Therefore, the upgradient property boundary is predominantly the northern property boundary, along Firestone Boulevard.

2.0 Distribution of Chemicals in Soil and Groundwater

This section presents the EKI investigative data and an evaluation of those data by Dragun Corporation and IT Corporation (Dragun/IT, May 2001). The following text, cited directly from the Dragun/IT report, describes the distribution and interpretation of data on soil gas, soil, and groundwater. The evaluation indicates the groundwater contamination beneath the Webb of California site does not appear to be related to site activities, but rather the chemicals in the groundwater appear to be derived from an upgradient, off-site source.

2.1 Areal Distribution of TCE and PCE in Soil Gas

The concentrations of trichloroethene (TCE) and tetrachloroethene (PCE) in soil gas are summarized in Table 2. Figure 6 shows the areal distribution of soil gas sampling and soil boring locations investigated by EKI (1998a). This figure indicates that EKI's investigation to determine soil sources was areally comprehensive and there was particular attention paid to the former anodizing area (Figure 1) in the southeast corner of the 5030 Firestone Boulevard property.

Figures 9 and 10 from the Dragun/IT Report show the observed distribution of TCE and PCE in soil gas as reported by EKI (1998a). Figure 9 indicates that the highest concentrations of TCE in soil gas are below the former anodizing area, inferring that the shallow soils in this area are the most impacted by TCE. Figure 9 also indicates high concentrations of TCE along the eastern property boundary of the Site.

Figure 10 indicates that the highest concentrations of PCE in soil gas are also near the former anodizing area, inferring that the shallow soils in this area are the most impacted by PCE. As with TCE, there is no indication of a shallow soil source of PCE along the northern (upgradient) property boundary of the Site.

Summary

In summary, both the TCE and PCE soil gas distributions indicate that shallow soil is impacted near the former anodizing area. Neither the TCE nor the PCE soil gas distributions indicate that shallow soil along the northern (upgradient) property boundary of the Site is impacted.

2.2 Distribution of TCE and PCE in Soil

The concentrations of TCE and PCE in soil are summarized in Table 3, from the Dragun/IT 2001 report. Figure 11 shows the spatial distribution of TCE and PCE in soil documented by EKI

(1998a, 1998b, and 1999a). Figure 11 includes the results of testing of soils from soil borings and from soil collected during the installation of monitoring wells MW-1, MW-2, MW-3, and MW-5. Figure 12 shows the vertical distribution of TCE in soil along hydrostatigraphic cross-section A-A' (EKI, 2000e).

Figures 11 and 12 indicate that there are low concentrations of TCE and PCE in soil underlying the Site. The highest of these concentrations were detected in soil boring B-4. This location coincides with the centroid of the TCE and PCE soil gas highs near the former anodizing area (Figures 9 and 10). Although there are low levels of TCE and PCE in the soil at the Site, there are several indications that impacted soil at the Site is not the source of high TCE concentrations in groundwater beneath the Site.

EKI (1999a) reported that TCE concentrations in groundwater at three monitoring locations (MW-1, CPT-6, and CPT-7) exceeded 25,000 micrograms per liter (µg/L). According to Cohen and Mercer (1993), a concentration in groundwater of a dense non-aqueous phase liquid (DNAPL) such as TCE greater than one percent of its aqueous solubility infers that the groundwater has been impacted by DNAPL somewhere along its flow path. For TCE, this would be a concentration in groundwater greater than 11,000 µg/L. Therefore, the observed concentrations of TCE in groundwater at the Site infer that TCE has reached the groundwater somewhere as a DNAPL. However, as we will show later, this must have occurred upgradient of the Site.

The characteristics of DNAPL movement in the subsurface are dependent upon site specific geologic and hydrogeologic conditions such as soil type, moisture content, and organic carbon content (Cohen and Mercer, 1993; Pankow and Cherry, 1996 and others). According to Cohen and Mercer (1993), the presence of chlorinated VOCs in tight soils, as found at the Site, in concentrations over 10,000 mg/kg would infer the presence of a DNAPL. However, Figure 11 shows that only two of the 78 soil samples tested exceed 10 mg/kg TCE, only one sample exceeds 20 mg/kg, and none of the samples exceed 300 mg/kg TCE. As mentioned previously, the highest concentration of TCE detected in soil was at 20 feet bgs at B-4 (270 mg/kg) near the former anodizer. Therefore, none of the observed soil chemistry data infer the presence of DNAPL in the soil at the site.

Similarly, other potential source areas, such as the sumps near soil borings B9 and B10 and the furnace pit near soil boring B11, have only low concentrations of TCE and PCE in the shallow soil (see Figure 1 for locations). These low concentrations indicate that these are unlikely sources of the observed groundwater contamination.

The same is true at the monitoring well locations where significant TCE concentrations are observed in the groundwater. Figure 11 shows that TCE concentrations in soil at monitoring wells MW-1, MW-2, MW-3, and MW-5 also exhibit the trend of no VOCs or low concentrations in the soil to at least 30 feet bgs (the limit of testing). These data, especially at MW-2, which is located hydraulically upgradient of the suspected soil sources (based on soil gas and soil chemistry data), indicate that on-site soil is not the source of the groundwater impact.

The stratigraphic conditions at the Site (Figure 5) are not conducive of the vertical migration of a DNAPL to the water table. The soil boring and CPT data indicate that a competent, continuous, two-to-five foot thick clayey unit extends across the Site at approximately 25 feet bgs. The clayey unit is described in the borehole logs as highly plastic, soft to firm, and moist (EKI, 1998b and 1999a). Above the clayey unit is almost 15 feet of moist to wet sandy silt to silty clay. These soils would slow any potential downward movement of chemicals to the water table due to their low hydraulic conductivity. Even if there had been DNAPLs at the site, they would have had to accumulate above the clayey unit until a sufficient head of DNAPL developed before they could penetrate the clayey unit (Cohen and Mercer, 1993). None of the 78 soil samples indicate that this happened.

Figures 12 and 13 show that TCE and PCE concentrations in the soil are generally low above the clayey unit (at about 25 feet bgs). Below the clayey unit, concentrations increase toward the water table (although not nearly high enough to produce the observed groundwater concentrations). The data from soil borings B-15 and B-17 are good examples of this trend. These data suggest that TCE in soil just above the water table is due to the impacted groundwater (off-gassing or smear zone) and not the overlying soil.

Summary

In summary, the 78 soil samples collected from the site indicate at most, only low concentrations of TCE and PCE. The observed concentrations are not high enough nor are they in locations that would explain the distribution of chemicals in groundwater. In fact, the observed TCE and PCE concentrations in the deep soils near the water table most likely originated from the groundwater, not from the overlying soil. Therefore, the TCE and PCE observed in the groundwater must be due to an upgradient, off-site source.

2.3 Distribution of TCE and Other Chemicals in Groundwater

The concentrations of VOCs detected in groundwater are summarized in Tables 4 and 5. Figure 14 shows the distribution of TCE in groundwater at the monitoring wells during September 2000 (EKI, 2000). Similar to this map, Figure 15 shows the distribution of TCE in groundwater

during October/November 1998. The most complete representation of the distribution of TCE in groundwater is the data collected during the October/November 1998 sampling event. CPT data were only collected during the October 1998 sampling event. The CPT samples provide critical groundwater data in areas not assessed during the other monitoring events. The availability of the CPT groundwater sample data from October 1998 provides additional data to assess the areal distribution of TCE in groundwater during the autumn of 1998.

Since Figures 14 and 15 indicate similar distributions and magnitudes of TCE concentrations in groundwater at the monitoring wells, it is reasonable to assume that the areal distribution of TCE shown in the October/November 1998 data (Figure 12) is representative for other monitoring periods. For this purpose, the distributions of chemicals in groundwater during October/November 1998 are used to evaluate the source of chemicals in groundwater in this report.

Figures 15 through 19 are concentration contour maps that show the areal distributions of TCE, PCE, 1,1-DCE, 1,1-DCA, and cis 1,2-DCE in groundwater beneath the Site in October/November 1998. Figures 15 through 19 provide a general indication of the exact distribution of groundwater chemistry at the Site. As with any groundwater chemistry data considered in any hydrogeological investigation, the exact distributions of the chemicals in groundwater at the Site cannot be determined.

The contours in Figures 15 through 19 were drawn using (1) linear interpolation between known data points, (2) dashed contours where additional hydrogeologic information supplemented linear interpolation (explanations are provided for dashed contours where used), (3) the data from the monitoring wells where both data from the upper few feet (the CPT samples) and from the upper 30 feet (the monitoring well samples) of the saturated zone were available (for example, at MW-5 and CPT-5), and (4) groundwater chemistry data from October 1998 (CPT PIPP samples) and November 1998 (monitoring well samples).

2.3.1 Distribution of TCE in Groundwater

Figure 15 shows the areal distribution of TCE in groundwater beneath the Site in October/November 1998. A dashed contour for the 30,000 µg/L contour north of CPT-6 was used because the data indicate that TCE originates from an off-site source located upgradient (north) of the Site. The location and non-closure of the 30,000 µg/L contour in Figure 15 are consistent with the 10,000 and 20,000 µg/L contours, which do not close in the upgradient (north) direction.

We surmise that the TCE in groundwater originated off site because:

1. There is a high TCE concentration in groundwater at MW-2, which is located on the upgradient property boundary. However, the soil gas and soil chemistry data (Figures 9 and 11) show no detectable TCE in soil at MW-2.

2. Similarly, there are high TCE concentrations in groundwater at CPT-6 and CPT-7. However, the soil (B-5, B-10, and B-15 near CPT-6 and B-9 near CPT-7) and the soil gas data show no indication of substantial TCE in soil at these locations. Although these locations are not on the upgradient property boundary, they are located hydraulically upgradient from the highest soil gas concentrations (Figure 9 and 10) and from the highest concentrations of TCE in the soil (Figure 11).

3. None of the on-site chemistry data can explain the high concentrations of TCE observed in the groundwater. As mentioned earlier in the section on soil chemistry, the high TCE concentrations in groundwater at MW-1, CPT-6, and CPT-7 (>25,000 µg/L) infer that DNAPL is impacting the groundwater somewhere. However, none of the 78 soil samples collected at the Site have TCE concentrations that would infer the presence of DNAPL (77 of the 78 samples have less than 20 mg/kg, all are less than 300 mg/kg; versus greater than 10,000 mg/kg to infer DNAPL).

2.3.2 Distribution of PCE in Groundwater

Figure 16 shows the areal distribution of PCE in groundwater beneath the Site in October/November 1998. Dashed contours were used for the 100-µg/L contour north and northwest of CPT-6. Accordingly, this contour north of CPT-6 is not closed because of the uncertainty of the PCE concentration at CPT-7 (elevated detection limit).

PCE was detected in groundwater only at CPT-6 and MW-1. Elevated detection limits were also reported at MW-2, MW-3, MW-5, and CPT-7, locations where high TCE concentrations were reported.

2.3.3 Distribution of 1,1-DCE in Groundwater

Figure 17 shows the areal distribution of 1,1-DCE in groundwater beneath the Site in October/November 1998. 1,1-DCE can be a breakdown product of several VOCs including PCE, TCE, 1,1,1-TCA, and 1,1-DCA (Dragun, 1998).

The highest concentrations of 1,1-DCE were observed at MW-1 and CPT-7. The 1,1-DCE plume is wide, extending from at least MW-2 in the northwest to at least MW-5 in the southeast. 1,1-DCE was detected in groundwater at MW-2, which is on the upgradient property boundary. However, there was no detectable 1,1-DCE in soil at monitoring well MW-2 down to the limit of testing at approximately 30 feet bgs. Furthermore, there were no detections of 1,1-DCE in any of the 78 soil samples collected from the Site.

2.3.4 Distribution of 1,1-DCA in Groundwater

Figure 18 shows the areal distribution of 1,1-DCA in groundwater beneath the Site in October/November 1998. 1,1-DCA can be a breakdown product of several VOCs including PCE, TCE, 1,1,1-TCA, and 1,1-DCE (Dragun, 1998 and Pankow and Cherry, 1996).

A dashed contour for the 200 µg/L contour north of CPT-6 was used because it is suspected that 1,1-DCA originated from an off-site source located upgradient (north) of the Site. The location and non-closure of the 200 µg/L contour are consistent with the 100 µg/L contour, which does not close in the upgradient (north) direction.

We surmise that the 1,1-DCA originated off site because:

1. 1,1-DCA was detected in groundwater at MW-2, which is located on an upgradient property boundary. However, the soil chemistry data at MW-2 indicate no detectable 1,1-DCA or parent compound in the soil at MW-2.

2. Similarly, there are (1) high 1,1-DCA concentrations in groundwater at CPT-6 and CPT-7, (2) detections in groundwater at CPT-8, CPT-4, and MW-3, and (3) elevated detection levels at MW-1, MW-5, and CPT-5. However, the soil chemistry data at B-5, B-10, and B-15 near CPT-6 and B-9 near CPT-7 indicate no detectable 1,1-DCA. In fact, the soil chemistry data show no detections of 1,1-DCA in any of the 78 soil samples.

2.3.5 Distribution of cis 1,2-DCE in Groundwater

Figure 19 shows the areal distribution of cis 1,2-DCE in groundwater beneath the Site in October/November 1998. This chemical can be a breakdown product of several VOCs including PCE, TCE, and 1,2-DCA (Dragun, 1998).

The general distribution of cis 1,2-DCE appears to be different from those of TCE, PCE, 1,1-DCE, and 1,1-DCA. The highest observed concentration of cis 1,2-DCE was at MW-5, which is located along the eastern property boundary. There was no cis 1,2-DCE detected in soil at MW-

5. The only VOC detected in soil at MW-5 was TCE at 550 µg/kg at 41 feet bgs near the water table. TCE was not detected in either of the soil samples collected from 21 feet bgs or 31 feet bgs at MW-5.

2.3.6 Summary

In summary, the distribution of chemicals in groundwater cannot be accounted for by the observed distribution of chemicals in soil and the observed groundwater flow direction. For example, the high concentrations of TCE in groundwater along the upgradient property boundary at MW-2 cannot be explained by the observed distribution of chemicals in the soil at MW-2 or by other on-site locations in view of the observed groundwater flow direction. Rather, the observed distribution of chemicals in the soil and the groundwater flow direction indicate an upgradient and off-site source for the groundwater contamination. Similarly, the very high concentration of TCE at CPT-6 cannot be explained by the observed concentrations of TCE in soil near CPT-6 or by other on-site locations in view of the observed groundwater flow direction. Rather, the observed distribution of chemicals in soil and the flow direction of groundwater indicate an upgradient and off-site source for groundwater contamination.

2.4 TCE/PCE Fingerprint

The ratio of TCE to PCE in the Site soils is strikingly different from that in the groundwater. This further supports that an off-site, rather than an on-site, source has impacted the groundwater. The following section discusses the TCE/PCE ratio in the soil gas, soil, and groundwater.

Table 2 summarizes the TCE and PCE concentrations observed in the soil gas at the Site. Table 2 shows that the TCE to PCE ratio in soil gas ranges from about 0.1 to 2.5 for 34 of 37 soil gas sampling locations. At the three other locations, which are adjacent to the eastern property boundary (SG-35 to SG-37; Figure 7 and 8), the TCE to PCE ratio ranges from 2 to 8.5.

In summary, the soil gas data indicate that the shallow impacted soil can be characterized by a TCE to PCE ratio of less than about 2.5:1.

Table 3 summarizes the TCE and PCE concentrations observed in the soil at the Site. Table 3 shows that the TCE/PCE ratios in soil samples collected from above the clayey unit at about 25 feet bgs is generally about 1:1. The soil sample with the highest observed concentrations of TCE and PCE (soil boring B4 at 20.5 feet) has a TCE/PCE ratio of about 2:1. Table 3 shows that

below the clay unit, the TCE/PCE ratio increases to 10:1 at 30 feet depth and over 100:1 in soils near the water table.

Tables 4 and 5 summarize the TCE/PCE ratios in groundwater and Figure 20 shows the TCE/PCE ratio in groundwater during October/November 1998. Figure 20 shows that the TCE/PCE ratio in the central area of the groundwater plume is on the order of 150 to 300:1. For example, at CPT-6, the TCE/PCE ratio during October/November 1998 was 318:1. At MW-1, the ratio was 165:1. Table 4 shows that similar ratios were observed during other monitoring events.

Table 3 indicates that some of the TCE/PCE ratios in the soils near the water table approach the ratios of the groundwater. It is our opinion the TCE/PCE ratios for the soils near the water table indicate that these soils have been impacted by chemicals in the groundwater. This opinion is further supported by the observation that the soils near the water table do not contain sufficient TCE or PCE to explain the concentrations observed in the groundwater.

2.4.1 Summary

In summary, the observed ratios of TCE and PCE in soil gas and soil matrix are distinctly different from that of the impacted groundwater beneath the Site. The soil gas and soil matrix data indicate that the ratio of TCE to PCE in the soils above the clayey unit is generally about 2.5:1. However, the ratio of TCE to PCE in soils below the clay range from 100:1 to 200:1 approaching the water table. The ratio in the groundwater is on the order of 150 to 300:1. The TCE to PCE ratios of the impacted soil near the water table indicate that chemicals in groundwater, rather than chemicals from the shallow soils, have impacted the soils near the water table.

2.5 Conclusion on Data Summary

It is our professional opinion that the groundwater beneath the Jervis B. Webb Company of California property located at 5030 Firestone Boulevard, South Gate, California has been substantially impacted by an off-site source, not by on-site activities. There are three main bases for our opinion, including:

1. The observed groundwater flow direction in the uppermost aquifer at the Site has consistently been from north to south during the period of observation. This means that the upgradient property boundary is along Firestone Boulevard. VOCs such as TCE have been detected in the groundwater at MW-2, which is located on the upgradient property

boundary. Since the soil gas and soil chemistry data indicate that there is no detectable TCE in the soil at MW-2, the TCE in the groundwater must have originated from an upgradient and off-site source.

2. Concentrations of TCE exceeding 25,000 µg/L have been reported in the groundwater at MW-1, CPT-6 and CPT-7. These high concentrations of TCE infer that DNAPL has impacted the groundwater somewhere along its flow path. However, the concentrations of TCE observed in soil are magnitudes lower than would be necessary to infer the presence of DNAPL in the soil. Therefore, the observed soil concentrations of TCE are not high enough to explain the observed groundwater concentrations of TCE. Furthermore, the continuous clayey unit encountered at about 25 feet bgs would inhibit the vertical migration of DNAPL to the water table, which is located at approximately 45 feet bgs. No soil chemistry data indicate that DNAPL has accumulated above the clayey unit at the Site.

3. The ratios of TCE to PCE in the soil gas and soil are similar to each other; however, they are strikingly different from the TCE to PCE ratio in the groundwater. This indicates that the TCE and PCE in the soil have not caused the TCE and PCE impact in the groundwater.

It is also our professional opinion that the impacted soil below the clayey unit at about 25 feet bgs has been impacted by the groundwater and not by a surface release of chemicals at the Site. There are three main bases for our opinion, including:

1. As mentioned previously, the observed concentrations of VOCs in the soils are not high enough to be the source of the groundwater contamination.

2. The TCE/PCE ratio in the deeper soils is much more similar to that of the impacted groundwater than to that of the soil above the clayey unit.

3. The clayey unit at 25 feet bgs would restrict the downward migration of chemicals from above.

3.0 Soil Remediation Activities

Four soil vapor extraction (SVE) wells and four vapor monitoring probes were installed at the site in June 1999. Three of the monitoring probes were later converted to SVE wells by connecting to the SVE vacuum manifold. A total of four shallow SVE wells are screened from 19 to 25 feet, while three deep SVE wells are screened from 30 to 40 feet. The locations of the SVE wells are shown in Figure 7 in Appendix C, which is a reproduction of pertinent SVE data from EKI's most recent Quarterly Progress Report for the site (EKI, April 2001).

The SVE system designed by EKI operates at a flow rate of approximately 200 scfm and extracted vapors are treated by two 1,000 pound granular activated carbon vessels in series under a permit issued by the South Coast Air Quality Management District. The SVE system started operation on March 16, 2000. The system has operated nearly continuously for the past 15 months, except for a few brief down periods. EKI has routinely monitored the system on a weekly basis to collect data regarding total flow rate, vacuum, temperature, and influent vapor concentrations monitored with a photo-ionization detector (PID).

Influent PID vapor readings have ranged from a high of over 2,000 ppmV in March 2000 to 8.5 ppmV in March 2001. Grab samples (Tedlar bag) of the influent have also been periodically collected and analyzed for VOCs. The TCE concentration in the influent have decreased from 860 ppmV to 30 ppmV over the period of SVE operation. TCE concentrations in the individual extraction wells have also shown dramatic decreases, in particular well SVE-1 which has declined from 10,000 ppmV to 350 ppmV. The system influent and the seven SVE wells have all reached an asymptotic level with respect to TCE concentrations. Figures illustrating the TCE and PID concentrations over time in the influent and individual wells are provided in Appendix C.

EKI estimated that a total of 133 pounds of VOCs had been removed from the soil as of December 2000 (EKI 2001). Mass removal rates have decreased substantially since the initial startup, but EKI estimated another 10 pounds of VOCs have been removed in the first quarter of 2001. This removal total (143 pounds) can be compared with an estimate of contaminant mass that was present in the soil prior to the start of remediation. Based on the EKI's soil boring data, IT has calculated that approximately 177 pounds of VOCs were originally present in the soil. Comparison of the pre-remediation mass with the mass removed indicates that approximately 81 percent of the mass has been removed from the soil. A copy of IT's soil mass calculations are provided in Appendix D.

4.0 Proposed Work Plan

The Webb of California site is being considered for soil closure for the following reasons:

- The SVE system has operated for 15 months (March 2000 to present) and has removed an estimated 143 pounds of VOCs from the soil. It is estimated that approximately 81 percent of the mass originally in the soil has been removed.

- The TCE concentrations in the system influent and the individual extraction wells have decreased dramatically over the 15 months of operation and have reached asymptotic levels.

In order to obtain soil closure from the RWQCB, IT proposes to sample three confirmation soil borings. The confirmation borings will be placed near areas of previously documented soil contamination (i.e., borings B-4, B-18, and B-7). The locations of the proposed confirmation soil borings are shown in Figure 21. The following specific locations will be sampled :

Confirmation Boring No.	Location
CB-1	Approximately 15 feet west of the clarifier near boring B-4
CB-2	Approximately 15 feet south of the clarifier near boring B-18
CB-3	Approximately 20 feet northeast of the clarifier between borings B-7 and B-8

The confirmation boring locations were selected to evaluate current soil concentrations at the known areas of contamination that existed before remediation of the soil was initiated. In this fashion, the results of the confirmation borings will demonstrate that the TCE contamination has been sufficiently removed by the operation of the SVE system.

The confirmation borings will be advanced using a truck-mounted Geo-probe (direct-push) rig provided the site soil is easily penetrated. If this rig cannot reach the targeted depth, a larger Cone Penetrometer Testing (CPT) rig will be utilized instead. In either case, a split spoon sampler will be used to collect soil samples at 5-foot intervals to the 40-foot target depths (water table) in each boring. Five (5) gram Encore soil samples will be extracted from the brass sleeves collected from each boring at depths of 6, 10, 15, 20, 25, 30 and 35 feet (bgs). A sample at 40 feet (capillary fringe) will be collected and may be analyzed if the moisture in the sample is not

observed to be excessive. Photo-ionization detection readings will be recorded at each depth interval in all of the borings with a calibrated PID.

4.1 Laboratory Analyses

The Encore soil samples collected from the three borings will be analyzed for VOCs using EPA Method 8260. Two additional soil samples will be obtained from the continuous, 2 to 5-foot thick clay layer present at approximately 25 feet bgs beneath the subject site. One of the samples will be submitted to a geotechnical laboratory to determine particle size distribution (ASTM D422), moisture content (ASTM D2216); porosity (American Petroleum Institute [API] Method RP 40); bulk density (ASTM D2937); and total organic carbon content (Walkley-Black Method). The second clay sample will be analyzed for VOC leachability (SPLP) using EPA Test Method 1320/8260. Proper chain of custody procedures will be followed.

4.2 Soil Closure Report

The results of the confirmation soil borings will be summarized in a Soil Closure Report to be prepared and submitted to the RWQCB for approval. The report will include a summary of the laboratory results and a discussion of our findings as well as recommendations. The confirmation boring laboratory results will be evaluated using the VOC attenuation procedure in the RWQCB's *Site Assessment & Cleanup Guidebook (1996)* in order to demonstrate that the remaining PCE/TCE concentrations are below acceptable levels. If necessary, the results of the VOC leachability test will be used to demonstrate that the continuous clay layer beneath the subject site would further limit vertical migration of PCE/TCE. The appendices will include original lab reports, boring logs, and chain of custodies.

4.3 Schedule

The sampling of the confirmation borings will be scheduled within about one week after approval of this work by the LAWQCB. It is anticipated the field work can be completed by about August 1, 2001 (approximately two weeks after RWQCB approval of work plan). The Soil Closure Report will be completed and submitted to the RWQCB approximately 30 days after completion of the field tasks.

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TABLES

TABLES

Table 1. Summary of Water Table Elevation Data
5030 Firestone Boulevard
South Gate, California
Project #21025-02

DATE	MW-1 (FMSL)	MW-2 (FMSL)	MW-3 (FMSL)	MW-4 (FMSL)	MW-5 (FMSL)
02/27/98	61.30	62.63	61.32	na	na
03/02/98	61.27	62.59	61.31	na	na
03/04/98	61.51	62.52	61.47	na	na
04/08/98	61.52	na	61.48	na	na
05/20/98	62.10	63.14	62.07	na	na
10/08/98	62.71	63.81	62.61	na	na
11/03/98	na	na	na	61.95*	62.81*
11/05/98	62.95	64.01	62.27	62.08	62.83
12/21/98	62.72	63.96	62.54	61.79	62.55
01/19/99	62.83	63.99	62.69	61.92	62.67
02/03/99	63.11	64.10	62.90	62.09	62.93
03/30/99	62.87	64.02	62.68	61.83	62.64
06/01/99	62.61	63.74	62.29	61.44	62.25
07/29/99	62.27	63.52	62.02	61.09	61.94
09/01/99	62.33	63.51	61.97	61.02	61.91
09/23/99	62.06	63.30	61.77	60.76	61.65
10/18/99	61.66	63.05	61.50	60.50	61.41
12/08/99	61.54	63.03	61.23	60.24	61.15
01/27/00	61.69	62.79	61.18	60.02	60.96
02/28/00	61.75	62.79	61.12	na	60.98
03/15/00	62.03	63.03	61.46	60.35	61.26
04/13/00	61.36	62.73	61.01	na	60.91
05/18/00	61.51	63.15	60.93	59.91	60.84
06/20/00	61.49	63.17	60.99	59.78	60.83
07/13/00	60.92	63.36	60.62	59.62	60.50
08/17/00	60.79	63.27	60.81	59.36	60.28
09/07/00	60.94	62.35	61.04	59.41	60.44
10/26/00	60.22	61.91	59.93	58.83	59.78
11/21/00	60.49	62.13	59.87	58.86	59.80
12/05/00	60.37	62.14	60.10	59.01	59.97

NOTES:
1) FMSL = feet above mean sea level
2) * = well developed.
3) Monitoring well northing and easting coordinates and top-of-casing elevations for wells MW-1, MW-2, and MW-3 were surveyed on 3/6/98 by Rattray & Associates.
4) Monitoring well northing and easting coordinates and top-of-casing elevations for wells MW-4 and MW-5 were surveyed on 12/21/98 by Rattray & Associates.
5) Data summarized from Erler & Kalinowski reports (EKI, 1998b, 1999a, 2000e).

Table 2. Summary of TCE and PCE Concentrations in Soil Gas
5030 Firestone Boulevard
South Gate, California
Project #21025-01

Parameter	SG-1-5 µg/L	SG-2-5 µg/L	SG-3-5 µg/L	SG-4-5 µg/L	SG-5-5 µg/L	SG-5-5 DUPLICATE µg/L	SG-6-5 µg/L	SG-7-5 µg/L	SG-8A-5 µg/L	SG-8B-5 µg/L	SG-8C-5 µg/L	SG-9-5 µg/L	SG-10-5 µg/L	SG-11-5 µg/L	SG-12-5 µg/L	SG-13-5 µg/L	SG-14-5 µg/L	SG-15-5 µg/L	SG-16-5 µg/L	SG-17-5 µg/L	SG-18-5 µg/L
PCE - tetrachloroethane	23	4.7	1.6	5.2	1.6	1.7	0.061	0.075	1.1	4.1	5.8	25	28	0.94	< 0.01	5	28	5.9	1	4.2	0.13
TCE - trichloroethene	9.6	3.9	3.9	8.9	1.5	1.6	< 0.01	< 0.01	2.3	4.4	4.5	11	13	0.47	< 0.01	7.9	8	4.7	0.96	2.2	0.074
1,1,1-TCA - 1,1,1-trichloroethane	0.5	0.5	0.15	0.13	0.044	0.043	0.013	< 0.01	0.46	0.65	0.59	0.71	0.26	0.036	< 0.01	0.18	0.5	0.2	0.046	0.2	0.017
TCE/PCE	0.4	0.8	2.4	1.7	0.9	0.9	0.2	0.1	2.1	1.1	0.8	0.4	0.5	0.5	1.0	1.6	0.3	0.8	1.0	0.5	0.6

Parameter	SG-19-5 µg/L	SG-20-5 µg/L	SG-21-5 µg/L	SG-22-5 µg/L	SG-23-5 µg/L	SG-24-5 µg/L	SG-24-5 DUPLICATE µg/L	SG-25-5 µg/L	SG-25-5 DUPLICATE µg/L	SG-26-5 µg/L	SG-27-5 µg/L	SG-28-5 µg/L	SG-29-2 µg/L	SG-30-3 µg/L	SG-31-3 µg/L	SG-32-5 µg/L	SG-33-5 µg/L	SG-34-5 µg/L	SG-35-5 µg/L	SG-36-5 µg/L	SG-37-5 µg/L
PCE - tetrachloroethane	0.12	0.74	3.7	25	1.3	0.57	0.68	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.036	0.028	0.021	< 0.01	3.2	6.3	1.9	3	2
TCE - trichloroethene	< 0.01	0.14	2.5	11	1.2	0.33	0.34	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.02	0.013	< 0.01	< 0.01	0.41	2.4	3.6	25	12
1,1,1-TCA - 1,1,1-trichloroethane	< 0.01	0.082	0.34	0.89	0.13	0.08	0.08	0.12	0.13	0.12	0.048	< 0.01	0.02	< 0.01	< 0.01	< 0.01	0.18	0.26	0.12	0.24	0.18
TCE/PCE	0.1	0.2	0.7	0.4	0.9	0.6	0.5	1.0	1.0	1.0	1.0	1.0	0.6	0.5	0.5	1.0	0.1	0.4	1.9	8.3	6.0

NOTES:
1) Analyses performed by Interphase, Inc. in an on-site mobile laboratory.
2) Samples collected on December 1 and 2, 1997.
3) Sample depth indicated in sample name. Depth indicated by last number separated by a hyphen in each sample description (i.e., sample SG-5-5 collected at five feet below ground surface [BGS]). Soil gas collected at five feet BGS except at locations SG-29, SG-30, and SG-31.
4) Additional compounds were detected as follows:
   Chloroform: SG-1-5 = 0.055 µg/l; SG-9-5 = 0.056 µg/l; SG-10-5 = 0.053 µg/l; SG-14-5 = 0.038 µg/l; SG-22-5 = 0.040 µg/l; SG-36-5 = 0.058 µg/l.
   Trichlorofluoromethane: SG-22-5 = 0.010 µg/l; SG-33-5 = 0.032 µg/l.
   Dichlorodifluoromethane: SG-33-5 = 1.2 µg/l.
5) Analyses performed in accordance with Los Angeles Regional Water Quality Control Board guidelines for active soil gas sampling.
6) Data summarized from Erler & Kalinowski reports (Appendix C; EKI, 1998a).

Table 3. Summary of TCE and PCE Concentrations in Soil
5030 Firestone Boulevard
South Gate, California
Project #21025-02

Sample Number Depth (feet)	B1-5.5 5.5 mg/kg	B1-11 11 mg/kg	B1-20 20 mg/kg	B2-5.5 5.5 mg/kg	B2-10.5 10.5 mg/kg	B3-6 6 mg/kg	B3-11 11 mg/kg	B4-6 6 mg/kg	B4-16 16 mg/kg	B4-20.5 20.5 mg/kg	B5-6 6 mg/kg	B5-10.5 10.5 mg/kg	B6-6 6 mg/kg	B6-10.5 10.5 mg/kg	B7-6 6 mg/kg	B7-11 11 mg/kg	B8-6 6 mg/kg	B8-11 11 mg/kg	B9-5.5 5.5 mg/kg	B9-10.5 10.5 mg/kg	B10-6 6 mg/kg	B10-11 11 mg/kg	B11-6 6 mg/kg
PCE - tetrachloroethane	0.074	0.13	0.035	0.018	0.045	0.042	0.12	0.076	2.2	140	0.025	0.065	0.13	0.019	0.055	< 0.015	0.0029	0.041	0.0036	0.022	0.027	< 0.015	0.061
TCE - trichloroethene	0.024	0.037	0.04	0.0073	< 0.015	0.01	0.034	0.021	0.092	270	0.0053	0.19	0.031	0.025	0.019	< 0.015	< 0.0025	0.05	< 0.0025	0.041	0.0064	0.036	0.016
TCE/PCE	0.32	0.28	1.14	0.41	0.33	0.24	0.28	0.28	0.04	1.93	0.21	2.92	0.24	1.32	0.35	1	0.86	1.22	0.69	1.86	0.24	2.4	0.26

Sample Number Depth (feet)	B11-11 11 mg/kg	B12-6 6 mg/kg	B13-6 6 mg/kg	B15-10 10 mg/kg	B15-16 16 mg/kg	B15-20.5 20.5 mg/kg	B15-26.5 26.5 mg/kg	B15-31 31 mg/kg	B15-35.5 35.5 mg/kg	B15-40 40 mg/kg	B16-6 6 mg/kg	B16-11 11 mg/kg	B16-16 16 mg/kg	B16-21 21 mg/kg	B16-26 26 mg/kg	B16-31 31 mg/kg	B16-35.5 35.5 mg/kg	B16-41 41 mg/kg	B16-46 46 mg/kg	B16-51 51 mg/kg	B17-6 6 mg/kg	B17-11 11 mg/kg	B17-16 16 mg/kg
PCE - tetrachloroethane	< 0.014	< 0.0025	< 0.0025	< 0.005	< 0.005	< 0.005	0.054	0.041	0.026	< 0.005	< 0.005	< 0.005	0.027	0.041	0.047	0.027	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
TCE - trichloroethene	0.035	< 0.0025	< 0.0025	< 0.005	< 0.005	< 0.005	0.38	0.52	0.14	1.2	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.41	0.39	1.3	< 0.005	< 0.005	< 0.005
TCE/PCE	2.5	1	1	1	1	1	7.04	12.68	5.38	240	1	1	0.19	0.12	0.11	0.19	1	82	78	260	1	1	1

Sample Number Depth (feet)	B17-21 21 mg/kg	B17-26 26 mg/kg	B17-31.5 31.5 mg/kg	B17-36 36 mg/kg	B17-41 41 mg/kg	B17-46 46 mg/kg	B17-53.5 53.5 mg/kg	B18-11 11 mg/kg	B18-16 16 mg/kg	B18-21 21 mg/kg	B18-27 27 mg/kg	B18-31 31 mg/kg	B18-36 36 mg/kg	B18-41 41 mg/kg	B18-46 46 mg/kg	B19-16 16 mg/kg	B19-21 21 mg/kg	B19-26 26 mg/kg	B19-31 31 mg/kg	B19-36.5 36.5 mg/kg	B19-41 41 mg/kg	B19-46 46 mg/kg
PCE - tetrachloroethane	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.4	0.37	0.66	0.093	0.14	< 0.005	0.091	0.18	0.42	0.28	0.28	0.25	< 0.005	0.16	0.18
TCE - trichloroethene	< 0.005	0.048	0.056	1.4	1.2	1.6	1.4	0.11	0.61	16	0.75	2	0.056	2.3	8.7	0.2	1.8	1.5	1.2	0.11	4	4.3
TCE/PCE	1	9.6	11.2	280	240	320	280	0.28	1.65	24.24	8.06	14.29	11.2	25.27	48.33	0.48	6.43	5.36	4.8	22	25	23.89

Sample Number Depth (feet)	MW1-10.5 10.5 mg/kg	MW1-20.5 20.5 mg/kg	MW1-30.5 30.5 mg/kg	MW2-10.5 10.5 mg/kg	MW2-20.5 20.5 mg/kg	MW2-30.5 30.5 mg/kg	MW3-11 11 mg/kg	MW3-20.5 20.5 mg/kg	MW3-30.5 30.5 mg/kg	MW5-21 21 mg/kg	MW5-31 31 mg/kg	MW5-41 41 mg/kg
PCE - tetrachloroethane	0.021	0.023	0.011	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0025	<0.0025	<0.050
TCE - trichloroethene	0.018	0.062	0.06	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.022	0.011	0.55
TCE/PCE	0.86	2.7	5.45	1	1	1	1	1	1	8.8	4.4	11

NOTES:
1) Analyses performed by Orange Coast Analytical using EPA methods 8240 and 8010.
2) Samples from borings B1 through B13 collected on October 28, 1997. Samples from borings B15 through B19 collected December 1 and 2, 1997 (EKI, 1998a).
3) Samples from MW-1 through MW-3 collected in June 1998 (EKI, 1998b).
4) Samples from MW-5 collected in January 1999 (EKI, 1999a).
5) Data summarized from Erler & Kalinowski reports (EKI, 1998a, 1998b, 1999a).

Table 4. Summary of VOC Concentrations in Groundwater - Monitoring Wells
5030 Firestone Boulevard
South Gate, California
Project #21025-02

Well ID	MW-1													MW-2								
Sample #	MW-1-0304	MW-1-0304 DUP	MW-1-0520	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1-A*	MW-1	MW-1	MW-1	MW-1	MW-2-0304	MW-2-0520	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2-A*	MW-2
Date	03/04/98 µg/L	03/04/98 µg/L	05/20/98 µg/L	11/05/98 µg/L	02/03/99 µg/L	06/01/99 µg/L	09/01/99 µg/L	12/08/99 µg/L	12/08/99 µg/L	03/15/00 µg/L	06/20/00 µg/L	09/07/00 µg/L	12/05/00 µg/L	03/04/98 µg/L	05/20/98 µg/L	11/05/98 µg/L	02/03/99 µg/L	06/01/99 µg/L	09/01/99 µg/L	12/08/99 µg/L	12/08/99 µg/L	03/15/00 µg/L
Benzene	< 100	< 100	< 125	< 125	< 125	< 100	< 100	< 250	< 100	< 100	< 100	< 100	< 100	< 10	< 10	< 10	< 10	< 10	< 10	< 13	< 10	< 10
Toluene	< 100	< 100	< 125	< 125	< 125	< 100	< 100	< 250	< 100	< 100	< 100	< 100	< 100	< 10	< 10	< 10	< 10	< 10	< 10	< 13	< 10	< 10
1,1-Dichloroethane (1,1-DCA)	< 100	< 100	< 125	< 125	< 125	< 100	**140**	< 250	**110**	< 100	< 100	< 100	< 100	**13**	**14**	**13**	**13**	**12**	**16**	< 13	**12**	< 10
1,1-Dichloroethene (1,1-DCE)	**220**	**210**	**160**	**140**	**130**	**140**	**220**	< 250	**150**	**160**	< 100	< 100	< 100	**34**	**38**	**36**	**36**	**34**	**49**	< 13	**22**	< 10
1,2-Dichloroethane (1,2-DCA)	< 100	< 100	< 125	< 125	< 125	< 100	< 100	< 250	< 100	< 100	< 100	< 100	< 100	< 10	< 10	< 10	< 10	< 10	< 10	< 13	< 10	< 10
cis-1,2-Dichloroethene (c-1,2-DCE)	**130**	**150**	**130**	**160**	**160**	**190**	**200**	< 250	**200**	**230**	< 100	< 100	< 100	**65**	**68**	**68**	**70**	**68**	**72**	**57**	**63**	**74**
trans-1,2,Dichloroethene (t-1,2-DCE)	< 100	< 100	< 125	< 125	< 125	< 100	< 100	< 250	< 100	< 100	< 100	< 100	< 100	< 10	< 10	< 10	< 10	< 10	< 10	< 13	< 10	< 10
Tetrachloroethene (PCE)	**140**	**160**	< 125	**170**	**160**	**160**	**190**	< 250	**160**	**150**	< 100	< 100	< 100	< 10	< 10	< 10	< 10	< 10	< 10	< 13	< 10	< 10
Trichloroethene (TCE)	**24,000**	**25,000**	**24,000**	**28,000**	**27,000**	**28,000**	**32,000**	**30,000**	**33,000**	**30,000**	**24,000**	**21,000**	**3,000**	**2,700**	**3,000**	**3,200**	**3,200**	**2,800**	**3,100**	**2,400**	**2,600**	**2,800**
TCE/PCE	171	156	192	165	169	175	168	120	206	200	240	210	300	270	300	320	320	280	310	185	260	280

Well ID	MW-2			MW-3															MW-4			
Sample #	MW-2	MW-2	MW-2	MW-3-0304	W-3-052	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3-A*	MW-3	MW-3	MW-3	MW-3	MW-3 DUP	MW-3	MW-3 DUP	MW-3 DUP	MW-4	MW-4	MW-4	MW-4
Date	06/20/00 µg/L	09/07/00 µg/L	12/05/00 µg/L	03/04/98 µg/L	05/20/98 µg/L	11/05/98 µg/L	02/03/99 µg/L	06/01/99 µg/L	09/01/99 µg/L	12/08/99 µg/L	12/08/99 µg/L	03/15/00 µg/L	06/20/00 µg/L	06/20/00 µg/L	09/07/00 µg/L	09/07/00 µg/L	12/05/00 µg/L	12/05/00 µg/L	11/05/98 µg/L	02/03/99 µg/L	06/01/99 µg/L	09/01/99 µg/L
Benzene	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 13	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	< 10	< 10	< 10	**13**	< 10	< 10	< 10	< 10	< 10	< 13	< 10	< 10	< 10	< 10	< 10	< 10	< 10	**20**	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloroethane (1,1-DCA)	< 10	< 10	< 10	**14**	**13**	**11**	**11**	**11**	**13**	< 13	**13**	**11**	**10**	**11**	< 10	< 10	< 10	< 10	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloroethene (1,1-DCE)	< 10	< 10	< 10	**82**	**58**	**66**	**64**	**66**	**80**	< 13	**55**	**61**	< 10	< 10	< 10	< 10	< 10	< 10	< 0.5	**2.1**	**65**	< 0.5
1,2-Dichloroethane (1,2-DCA)	< 10	< 10	< 10	< 10	< 10	< 10	< 10	**53**	< 10	< 13	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 0.5	< 0.5	< 0.5	< 0.5
cis-1,2-Dichloroethene (c-1,2-DCE)	**46**	**42**	**42**	**200**	**230**	**240**	**220**	**240**	**270**	**220**	**240**	**300**	**170**	**200**	**160**	**160**	**200**	**210**	**0.67**	< 0.5	**1.1**	< 0.5
trans-1,2,Dichloroethene (t-1,2-DCE)	< 10	< 10	< 10	< 10	**15**	**18**	**18**	**18**	**20**	< 13	**19**	**20**	**14**	**16**	< 10	< 10	< 10	< 10	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene (PCE)	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 13	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene (TCE)	**2,000**	**1,800**	**2,300**	**2,800**	**2,800**	**2,300**	**2,000**	**1,900**	**2,600**	**2,500**	**2,900**	**3,100**	**1,900**	**2,100**	**1,700**	**1,700**	**2,400**	**2,500**	**6.7**	< 0.5	**0.9**	< 0.5
TCE/PCE	200	180	230	280	280	230	200	190	260	192	290	310	190	210	170	170	240	250	13	0	2	0

Well ID	MW-4				MW-5																
Sample #	MW-4	MW-4	MW-4	MW-4	MW-5	MW-5 DUP	MW-5	MW-5 DUP	MW-5	MW-5 DUP	MW-5	MW-5 DUP	MW-5	MW-5-A*	MW-5 DUP	MW-5-A* DUP	MW-5	MW-5 DUP	MW-5	MW-5	MW-5
Date	03/15/00 µg/L	06/20/00 µg/L	09/07/00 µg/L	12/05/00 µg/L	11/05/98 µg/L	11/05/98 µg/L	02/03/99 µg/L	02/03/99 µg/L	06/01/99 µg/L	06/01/99 µg/L	09/01/99 µg/L	09/01/99 µg/L	12/08/99 µg/L	12/08/99 µg/L	12/08/99 µg/L	12/08/99 µg/L	3/1/5/00 µg/L	3/1/5/00 µg/L	06/20/00 µg/L	09/07/00 µg/L	12/05/00 µg/L
Benzene	**77**	< 0.5	< 0.5	< 0.5	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 50	< 25	< 50	< 25	< 50	< 50	< 25	< 10	< 10
Toluene	< 0.5	< 0.5	< 0.5	< 0.5	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 50	< 25	< 50	< 25	< 50	< 50	< 25	< 10	< 10
1,1-Dichloroethane (1,1-DCA)	< 0.5	< 0.5	< 0.5	< 0.5	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 50	< 25	< 50	< 25	< 50	< 50	< 25	< 10	< 10
1,1-Dichloroethene (1,1-DCE)	< 0.5	< 0.5	< 0.5	< 0.5	**42**	**40**	**49**	**45**	**52**	**56**	**40**	**69**	< 50	< 25	< 50	< 25	< 50	< 50	< 25	< 10	< 10
1,2-Dichloroethane (1,2-DCA)	< 0.5	< 0.5	< 0.5	< 0.5	< 25	< 25	< 25	< 25	**35**	**39**	< 25	< 25	< 50	< 25	< 50	< 25	< 50	< 50	< 25	< 10	< 10
cis-1,2-Dichloroethene (c-1,2-DCE)	< 0.5	< 0.5	< 0.5	< 0.5	**380**	**360**	**420**	**370**	**420**	**430**	**420**	**440**	**390**	**410**	**360**	**410**	**440**	**450**	**350**	**280**	**190**
trans-1,2,Dichloroethene (t-1,2-DCE)	< 0.5	< 0.5	< 0.5	< 0.5	**30**	**29**	**35**	**31**	**36**	**35**	**45**	**45**	< 50	**25**	< 50	**26**	< 50	< 50	< 25	< 10	< 10
Tetrachloroethene (PCE)	< 0.5	< 0.5	< 0.5	< 0.5	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 50	< 25	< 50	< 25	< 50	< 50	< 25	< 10	< 10
Trichloroethene (TCE)	**0.68**	< 0.5	< 0.5	< 0.5	**5,000**	**4,800**	**5,100**	**4,500**	**5,500**	**5,300**	**5,500**	**6,000**	**5,100**	**5,300**	**5,000**	**5,300**	**5,500**	**5,800**	**4,400**	**3,700**	**4,700**
TCE/PCE	1	1	1	1	200	192	204	180	220	212	220	240	102	212	100	212	110	116	176	370	470

NOTES:
1) Analyses performed by Orange Coast Analytical, Inc., in Tustin, CA, using EPA Method 8260.
2) < indicates that the analyte was not detected at a concentration above the indicated method detection limit.
3) * = samples collected on December 8, 1999, were initially analyzed on December 9, 1999, and were re-analyzed on December 17, 1999, in an attempt to achieve lower method detection limits.
4) Bolding represents detections above the method detection limit.
5) Data summarized from Erler & Kalinowski reports (EKI, 1998b, 1999a, 2000e).

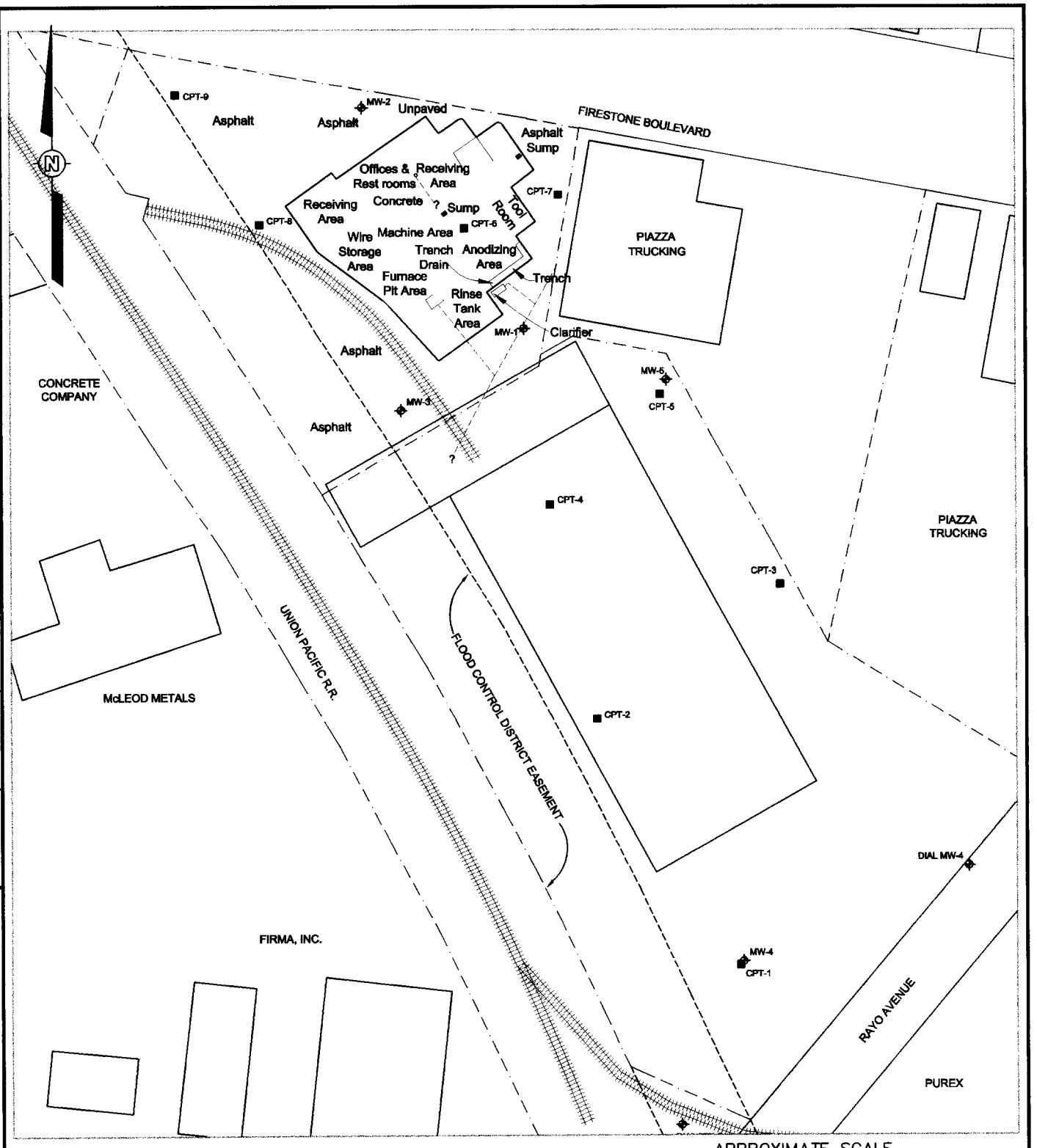
Table 5. Summary of VOC Concentrations in Groundwater - PIPP at CPT Locations
5030 Firestone Boulevard
South Gate, California
Project #21025-02

	CPT-1 10/01/98 55' BGS µg/L	CPT-1 10/01/98 95' BGS µg/L	CPT-2 10/01/98 55' BGS µg/L	CPT-3 10/01/98 55' BGS µg/L	CPT-4A 10/01/98 55' BGS µg/L	CPT-4B 10/01/98 55' BGS µg/L	CPT-5 10/01/98 55' BGS µg/L	CPT-6 10/02/98 55' BGS µg/L	CPT-7 10/02/98 55' BGS µg/L	CPT-8 10/02/98 55' BGS µg/L	CPT-9 10/02/98 55' BGS µg/L
Acetone	**170**	**8.1**	**300**	**170**	**95**	**80**	**480**	< 400	< 500	**16**	**490**
Methyl ethyl ketone (MEK)	**4.6**	< 1	**3.5**	**2.7**	**2.2**	**8.4**	< 25	< 200	< 250	< 1	**7.7**
Benzene	1.6	< 0.5	< 1	**0.58**	< 1	< 1	< 13	< 100	< 125	< 0.5	< 1
Toluene	< 0.5	< 0.5	**1.1**	**0.55**	**1.1**	< 1	< 13	< 100	< 125	< 0.5	< 1
Xylenes	< 0.5	< 0.5	< 1	**0.66**	**1.2**	< 1	< 13	< 100	< 125	< 0.5	< 1
1,1-Dichloroethane (1,1-DCA)	< 0.5	< 0.5	< 1	< 0.5	**1.2**	**1.1**	< 13	**240**	**160**	**1.4**	< 1
1,2-Dichloroethane (1,2-DCA)	< 0.5	< 0.5	< 1	< 0.5	< 1	< 1	< 13	< 100	< 125	< 0.5	< 1
1,1-Dichloroethene (1,1-DCE)	< 0.5	< 0.5	< 1	< 0.5	**4.1**	**3.4**	< 13	< 100	< 125	**6.7**	< 1
cis-1,2-Dichloroethene (c-1,2-DCE)	< 0.5	< 0.5	< 1	**2.6**	**11**	**10**	**110**	**130**	**190**	**11**	< 1
trans-1,2,Dichloroethene (t-1,2-DCE)	< 0.5	< 0.5	< 1	< 0.5	< 1	< 1	< 13	< 100	< 125	**1.3**	< 1
Tetrachloroethene (PCE)	< 0.5	< 0.5	< 1	< 0.5	< 1	< 1	< 13	**110**	< 125	< 0.5	< 1
Trichloroethene (TCE)	< 0.5	< 0.5	**1.6**	**6.3**	**220**	**200**	**3800**	**35000**	**27000**	**140**	**9.1**
TCE/PCE	1	1	2	13	220	200	292	318	216	280	9

NOTES:
1) Sample CPT-4B is a duplicate of CPT-4B.
2) Chemical analyses were performed by Orange Coast Analytical, Inc. in Tustin, CA.
3) California maximum contaminant levels (MCLs) are as reported in the Drinking Water Standards and Health Advisories Table by USEPA Region IX, dated June 1998.
"none" indicates that no MCL (California or federal) has been established.
4) Bolding represents detections above the method detection limit.
5) Data summarized from Erler & Kalinowski reports (EKI, 1998b).

FIGURES

DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
MB Miller 6-21-01			828208-A2



LEGEND

- MW-1 — Groundwater Monitoring Well
- CPT-1 — CPT/PIPP Groundwater Sample Location
- Sump
- Flood Control District Easement
- Property Line
- Sewer (not confirmed)
- Union Pacific Rail Road

NOTE: All locations are approximate.

REFERENCES: EKI, 1998a, Figure 2.
EKI, 1999, Figure 2.

IT CORPORATION

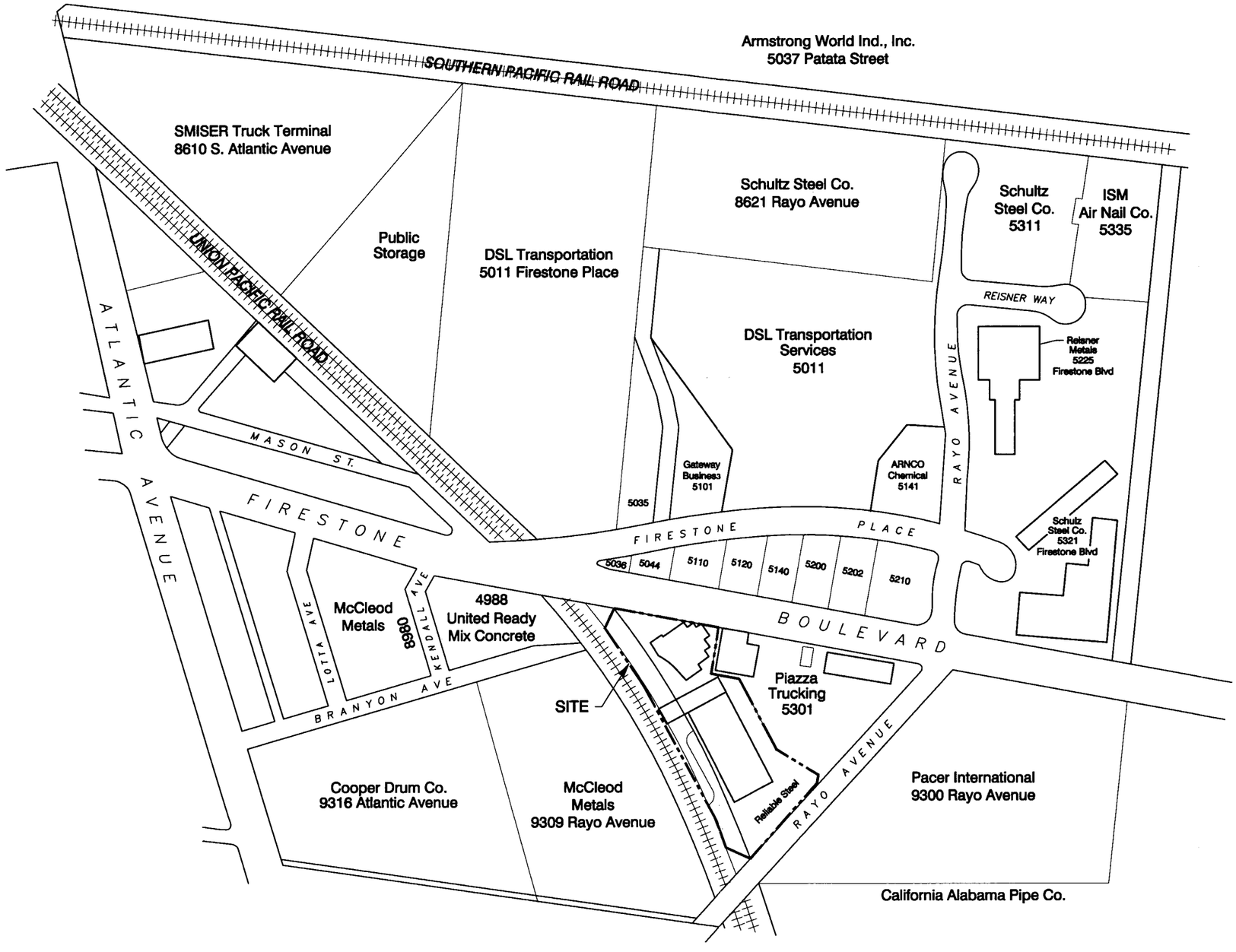
JERVIS B. WEBB OF CALIFORNIA

FIGURE 1

PROPERTY LOCATION MAP

JERVIS B. WEBB OF CALIFORNIA
5030 FIRESTONE BOULEVARD
SOUTH GATE, CALIFORNIA

DRAWING NUMBER	828208-B1
APPROVED BY	
CHECKED BY	
DRAWN BY	MB Miller 6-14-01



Street Addresses

5035	A. All Springs
5036	Engine Parts & Machine
5044	Ace Rubber, Inc.
5110	Gateway Business Forms
5120	Gateway Business Forms
5140	Label Craft
5200	AVCO Truck Parts & Oil Supply
5202	Interagency Repossessors Towing
5210	Schultz Steel Company

SCALE
0 300 600 FEET

REFERENCE:
ASSESSORS MAP
COUNTY OF LOS ANGELES CALIFORNIA

IT CORPORATION

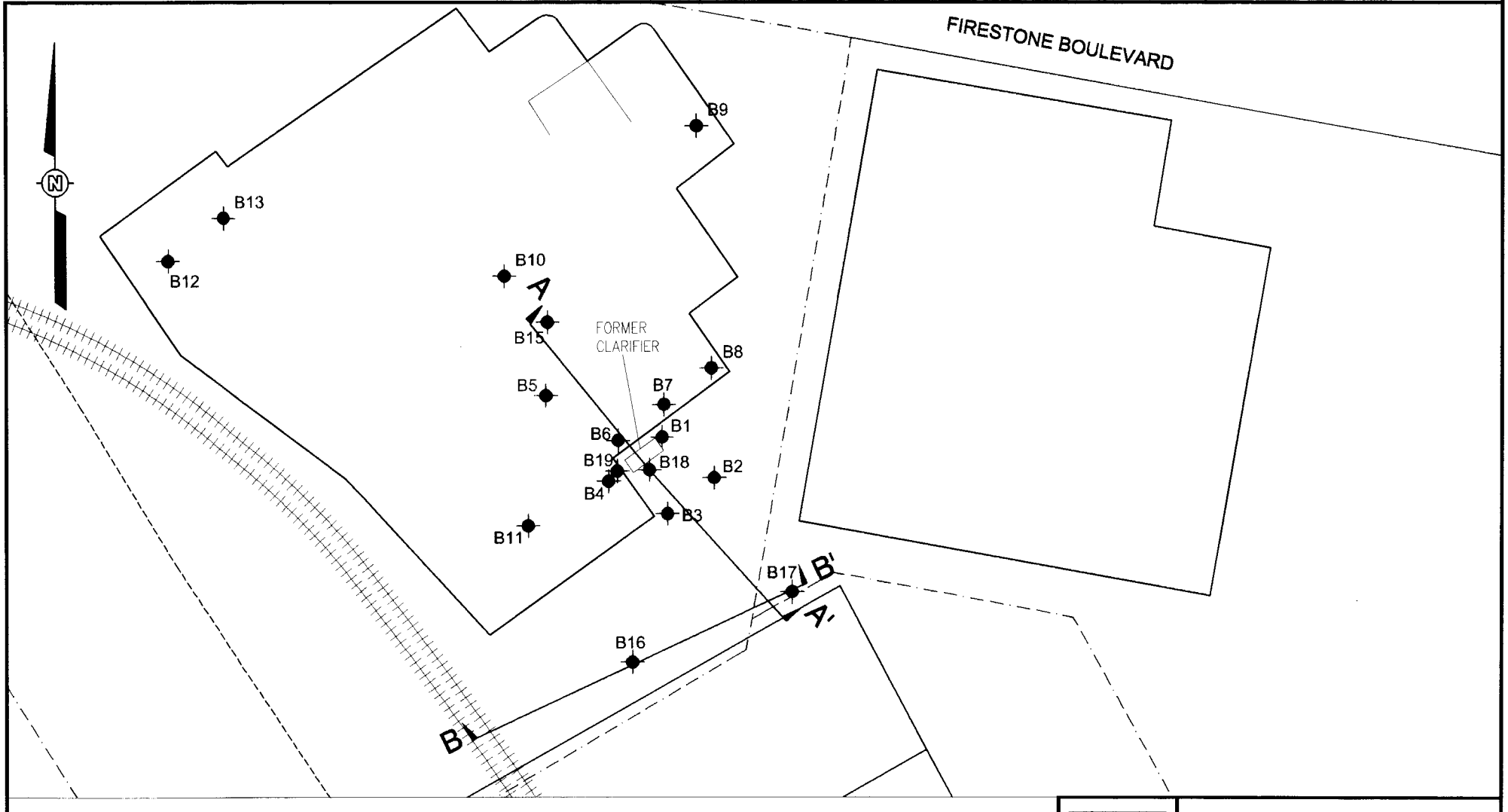
JERVIS B. WEBB
OF CALIFORNIA

FIGURE 2
SITE VICINITY MAP

JERVIS B. WEBB OF CALIFORNIA
5030 FIRESTONE BOULEVARD
SOUTH GATE, CALIFORNIA

000517

DRAWN BY		CHECKED BY		APPROVED BY		DRAWING NUMBER	828208-A3
MB Miller	6-21-01						



LEGEND

- B1 — Soil Boring Location
- A — A' — Cross Section Locations
- Flood Control District Easement
- Property Line
- Union Pacific Rail Road

NOTE: All locations are approximate.

APPROXIMATE SCALE

0 40 80 FEET

Reference: EKI, 1998a, Figure 9.

IT CORPORATION

JERVIS B. WEBB OF CALIFORNIA

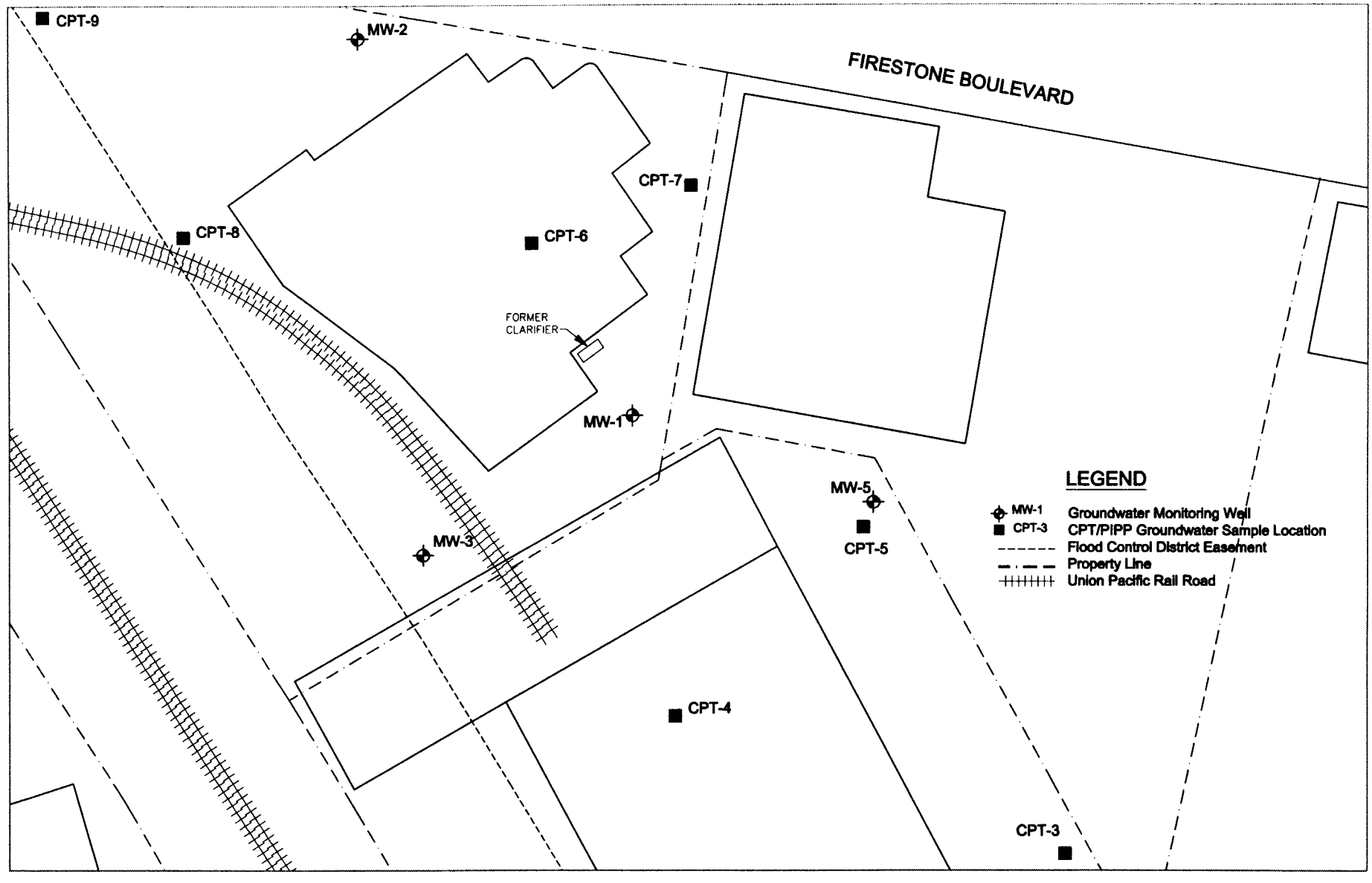
FIGURE 3

SOIL BORINGS AND CROSS-SECTION LOCATIONS

JERVIS B. WEBB OF CALIFORNIA
5030 FIRESTONE BOULEVARD
SOUTH GATE, CALIFORNIA

000518

DRAWN BY		CHECKED BY		APPROVED BY		DRAWING NUMBER	828208-A4
MB Miller	6-21-01						



NOTE: All locations are approximate.

REFERENCE: EKI, 1999, Figure 2.

IT CORPORATION

JERVIS B. WEBB OF CALIFORNIA

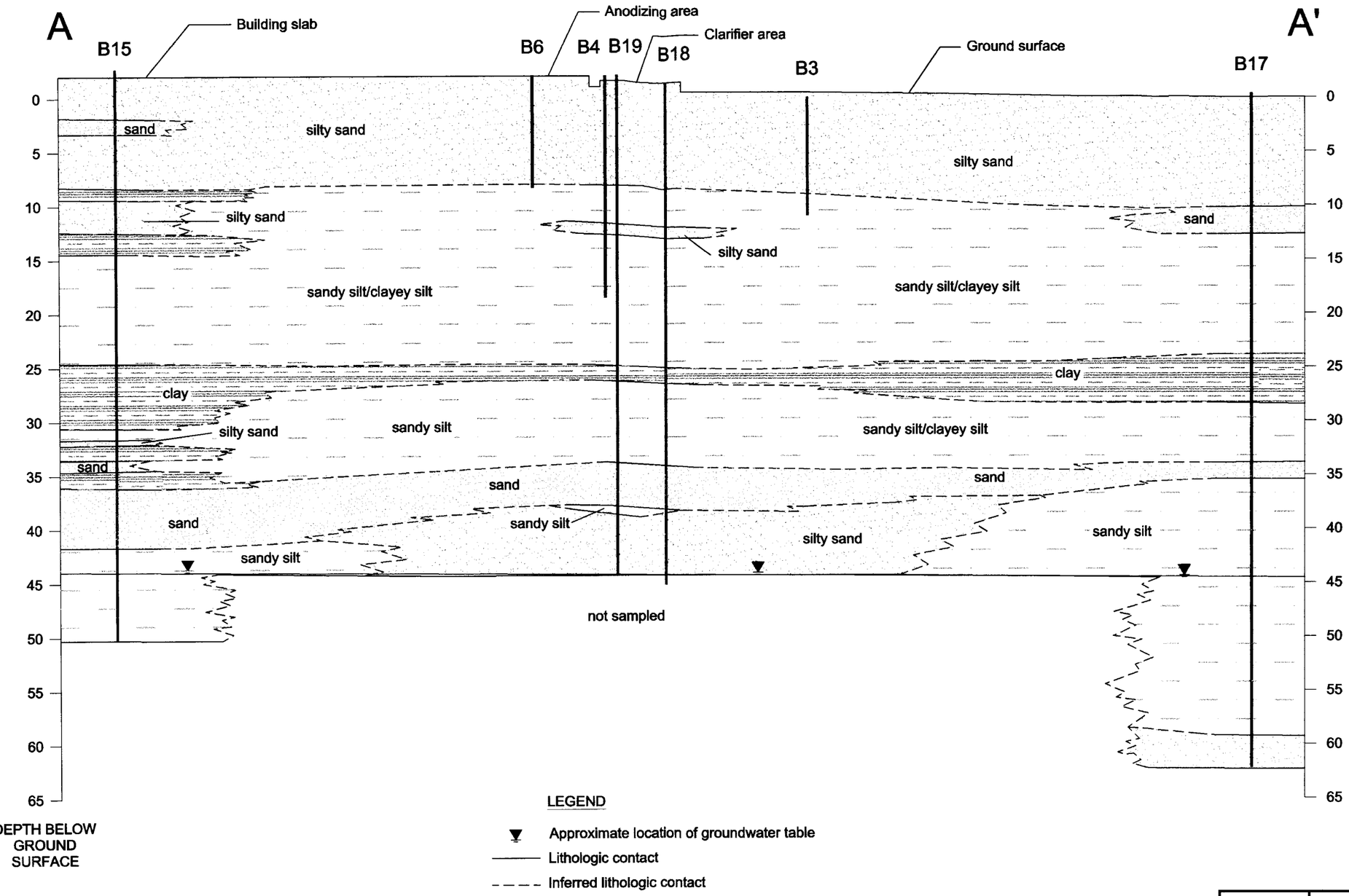
FIGURE 4

MONITORING WELL AND CPT/PIPP SAMPLE LOCATIONS

JERVIS B. WEBB OF CALIFORNIA
5030 FIRESTONE BOULEVARD
SOUTH GATE, CALIFORNIA

000519

DRAWING NUMBER	828208-B2
APPROVED BY	
CHECKED BY	
DRAWN BY	MB Miller
Date	



LEGEND

- ▼ Approximate location of groundwater table
- ——— Lithologic contact
- - - - - Inferred lithologic contact

SCALE

0 10 20 FEET

Reference: EKI, 1998a, Figure 10 (modified).

IT CORPORATION

JERVIS B. WEBB OF CALIFORNIA

FIGURE 5

GEOLOGIC CROSS-SECTION A-A'

JERVIS B. WEBB OF CALIFORNIA
5030 FIRESTONE BOULEVARD
SOUTH GATE, CALIFORNIA

000520

DRAWING NUMBER 828208-B7

APPROVED BY

CHECKED BY

DRAWN BY M. Schrage 6-20-01

B

B'

East Side LA County Flood Control District Easement

Rail Road Spur

MW-3 EKI

B-16 EKI

MW-1 EKI

EKI 1998a Fig. 10, Section A-A'

B-17 EKI

A.C.

EXISTING GROUND SURFACE

DEPTH (in feet) BELOW GROUND SURFACE

0
10
20
30
40
50
60
70
80

TD= 73 ft. bgs

TD=61.5 ft. bgs

TD=62 ft. bgs

LEGEND

Approximate location of groundwater table (High and low stands)

Lithologic contact; solid where approximate

Inferred lithologic contact

A.C. Asphalt / Concrete

SCALE
0 12 24 FEET

LITHOLOGIC/USCS SYMBOLS

cl INORGANIC CLAYS low to medium plasticity

ml INORGANIC SILTS very fine sands

sm SILTY SANDS

sp Poorly graded SAND with GRAVEL

sw Well graded SAND with GRAVEL

IT CORPORATION

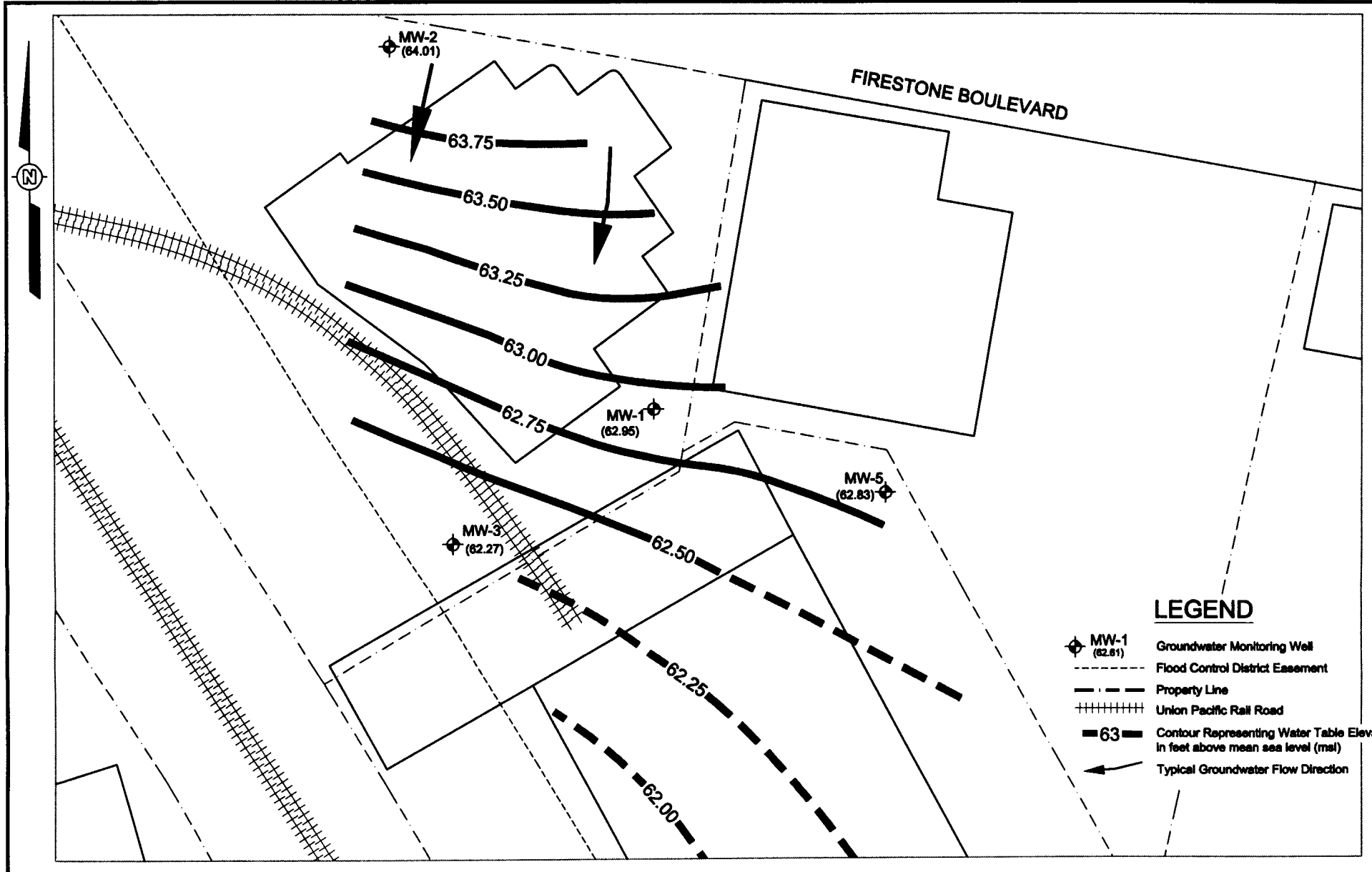
JERVIS B. WEBB OF CALIFORNIA

FIGURE 6
GEOLOGIC CROSS-SECTION B-B'

JERVIS B. WEBB OF CALIFORNIA
5030 FIRESTONE BOULEVARD
SOUTH GATE, CALIFORNIA

000521

DRAWN BY		CHECKED BY		APPROVED BY		DRAWING NUMBER	828208-A5
MB Miller	6-21-01						



APPROXIMATE SCALE

0 60 120 FEET

NOTE: All locations are approximate.

REFERENCE: EKI, 1999

IT CORPORATION

JERVIS B. WEBB OF CALIFORNIA

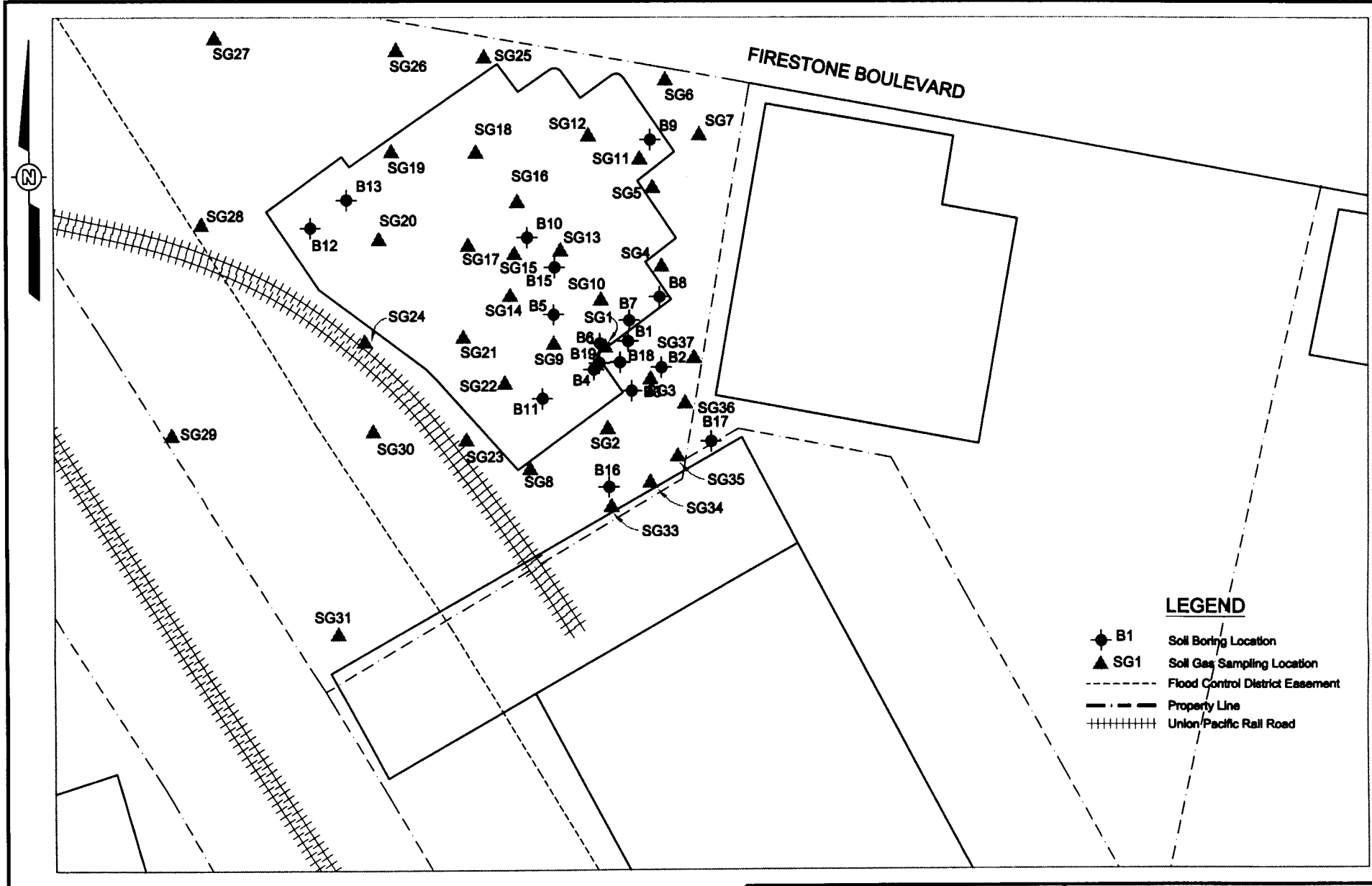
FIGURE 7

WATER TABLE FOR NOVEMBER 1998

JERVIS B. WEBB OF CALIFORNIA
5030 FIRESTONE BOULEVARD
SOUTH GATE, CALIFORNIA

000522

DRAWN BY		CHECKED BY		APPROVED BY		DRAWING NUMBER	828208-A6
MB Miller	6-21-01						



NOTE: All Locations Are Approximate.

REFERENCE: EKI, 1998a, Figure 3.

IT CORPORATION

JERVIS B. WEBB OF CALIFORNIA

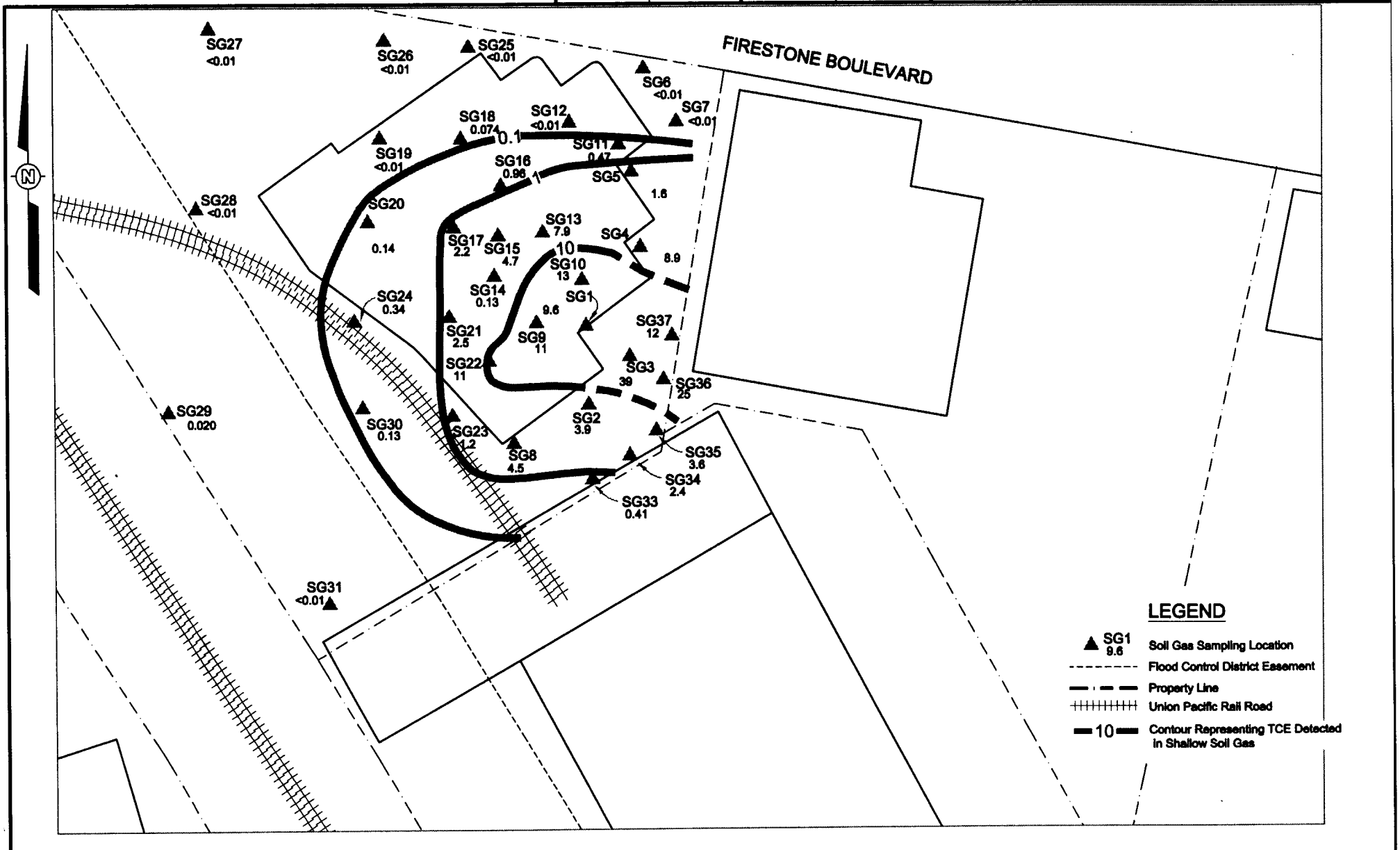
FIGURE 8

SOIL AND SOIL-GAS SAMPLING LOCATIONS

JERVIS B. WEBB OF CALIFORNIA
5030 FIRESTONE BOULEVARD
SOUTH GATE, CALIFORNIA

000523

DRAWN BY		CHECKED BY		APPROVED BY		DRAWING NUMBER	828208-A7
MB Miller	6-21-01						



NOTES:
1. All locations are approximate.
2. Soil gas concentration contours in units of micrograms per liter by volume in air.
3. Contours reproduced from EKI, 1998a.

REFERENCE: EKI, 1998a, Figure 4.

APPROXIMATE SCALE
0 60 120 FEET

IT CORPORATION

JERVIS B. WEBB OF CALIFORNIA

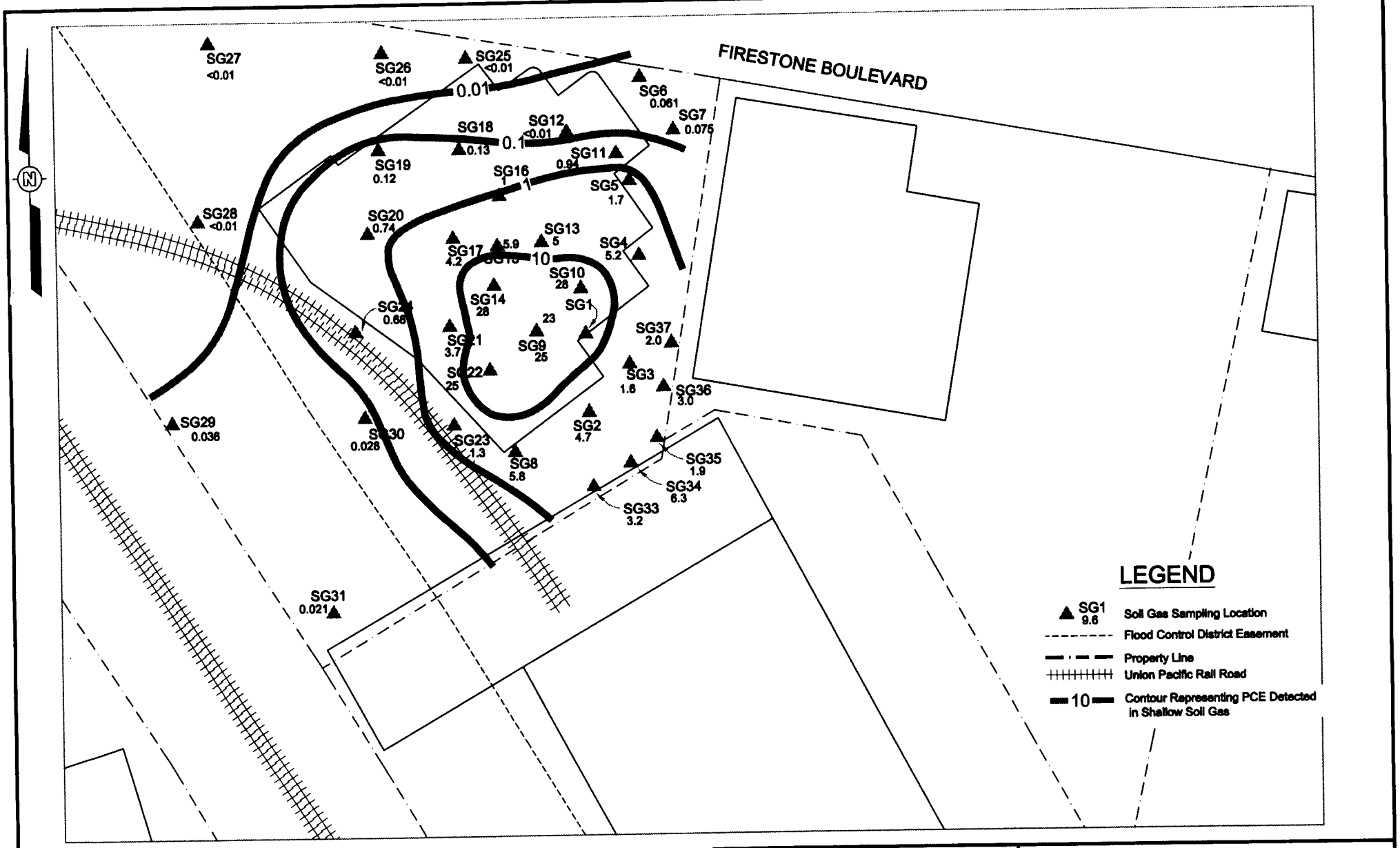
FIGURE 9

TCE IN SHALLOW SOIL-GAS

JERVIS B. WEBB OF CALIFORNIA
5030 FIRESTONE BOULEVARD
SOUTH GATE, CALIFORNIA

000524

DRAWN BY		CHECKED BY	APPROVED BY	DRAWING NUMBER
MB Miller	6-21-01			828208-A8



NOTE:
1. All locations are approximate.
2. Soil gas concentration contours in units of micrograms per liter by volume in air.
3. Contours reproduced from EKI, 1998a.

REFERENCE: EKI, 1998a, Figure 5.

APPROXIMATE SCALE
0 60 120 FEET

IT CORPORATION

JERVIS B. WEBB OF CALIFORNIA

FIGURE 10

PCE IN SHALLOW SOIL-GAS SEPTEMBER 2000

JERVIS B. WEBB OF CALIFORNIA
5030 FIRESTONE BOULEVARD
SOUTH GATE, CALIFORNIA

000525

DRAWING NUMBER	APPROVED BY	CHECKED BY	DRAWN BY	Date
828208-B4			MB Miller	

B2-5.5	5.5 Feet	TCE=0.007	PCE=0.018
B9-10.5	10.5 Feet	TCE=ND	PCE=0.045

B3-6	6 Feet	TCE=0.010	PCE=0.042
B3-11	11 Feet	TCE=0.034	PCE=0.12

B4-6	6 Feet	TCE=0.021	PCE=0.076
B4-16	16 Feet	TCE=0.092	PCE=2.2
B4-20.5	20.5 Feet	TCE=270	PCE=140

B5-6	6 Feet	TCE=0.005	PCE=0.025
B5-10.5	10.5 Feet	TCE=0.19	PCE=0.065

B6-6	6 Feet	TCE=0.031	PCE=0.13
B6-10.5	10.5 Feet	TCE=0.025	PCE=0.019

B7-6	6 Feet	TCE=0.019	PCE=0.055
B7-11	11 Feet	TCE=ND	PCE=ND

B8-6	6 Feet	TCE=ND	PCE=0.003
B8-11	11 Feet	TCE=0.050	PCE=0.041

B9-5.5	5.5 Feet	TCE=ND	PCE=0.004
B9-10.5	10.5 Feet	TCE=0.041	PCE=0.022

B10-6	6 Feet	TCE=0.006	PCE=0.027
B10-11	11 Feet	TCE=0.036	PCE=ND

B11-6	6 Feet	TCE=0.016	PCE=0.061
B11-11	11 Feet	TCE=0.035	PCE=ND

B12-6	6 Feet	TCE=ND	PCE=ND

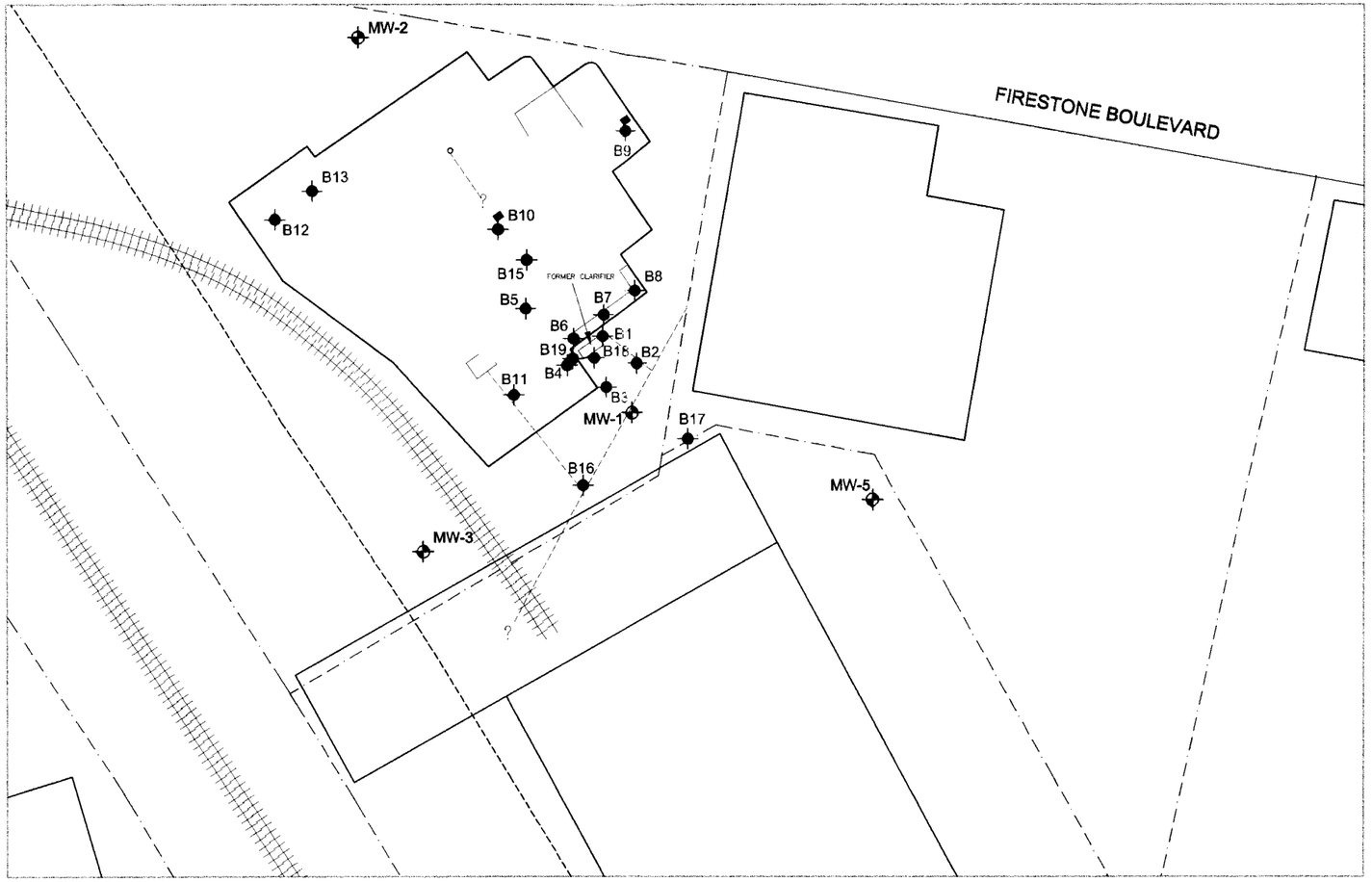
B13-6	6 Feet	TCE=ND	PCE=ND

MW-1	10.5 Feet	TCE=0.018	PCE=0.021
MW-1	20.5 Feet	TCE=0.062	PCE=0.023
MW-1	30.5 Feet	TCE=0.060	PCE=0.011

MW-2	10.5 Feet	TCE=<0.005	PCE=<0.005
MW-2	20.5 Feet	TCE=<0.005	PCE=<0.005
MW-2	30.5 Feet	TCE=<0.005	PCE=<0.005

MW-3	11 Feet	TCE=<0.005	PCE=<0.005
MW-3	20.5 Feet	TCE=<0.005	PCE=<0.005
MW-3	30.5 Feet	TCE=<0.005	PCE=<0.005

MW-5	21 Feet	TCE=0.022	PCE=<0.0025
MW-5	31 Feet	TCE=0.011	PCE=<0.0025
MW-5	41 Feet	TCE=0.55	PCE=<0.050



B15-10	10 Feet	TCE=ND	PCE=ND
B15-16	16 Feet	TCE=ND	PCE=ND
B15-20.5	20.5 Feet	TCE=ND	PCE=ND
B15-26.5	26.5 Feet	TCE=0.38	PCE=0.054
B15-31	31 Feet	TCE=0.52	PCE=0.041
B15-35.5	35.5 Feet	TCE=0.14	PCE=0.026
B15-40	40 Feet	TCE=1.2	PCE=ND
B15-44.5	44.5 Feet	TCE=1.3	PCE=ND

B16-6	9.5 Feet	TCE=ND	PCE=ND
B16-11	16 Feet	TCE=ND	PCE=ND
B16-16	20.5 Feet	TCE=ND	PCE=0.027
B16-21	26.5 Feet	TCE=ND	PCE=0.041
B16-26	31 Feet	TCE=ND	PCE=0.047
B16-31	35.5 Feet	TCE=ND	PCE=0.027
B16-35.5	40 Feet	TCE=ND	PCE=ND
B16-41	44.5 Feet	TCE=0.41	PCE=ND
B16-46	46 Feet	TCE=0.39	PCE=ND
B16-51	51 Feet	TCE=1.3	PCE=ND

B17-6	6 Feet	TCE=ND	PCE=ND
B17-11	11 Feet	TCE=ND	PCE=ND
B17-16	16 Feet	TCE=ND	PCE=ND
B17-21	21 Feet	TCE=ND	PCE=ND
B17-26	26 Feet	TCE=0.048	PCE=ND
B17-31.5	31.5 Feet	TCE=0.056	PCE=ND
B17-36	36 Feet	TCE=1.4	PCE=ND
B17-41	41 Feet	TCE=1.2	PCE=ND
B17-46	46 Feet	TCE=1.6	PCE=ND
B17-53.5	53.5 Feet	TCE=1.4	PCE=ND

B18-11	11 Feet	TCE=0.11	PCE=0.40
B18-16	16 Feet	TCE=0.61	PCE=0.37
B18-21	21 Feet	TCE=16	PCE=0.66
B18-27	27 Feet	TCE=0.75	PCE=0.093
B18-31	31 Feet	TCE=2.0	PCE=0.14
B18-36	36 Feet	TCE=0.056	PCE=ND
B18-41	41 Feet	TCE=2.3	PCE=0.091
B18-46	46 Feet	TCE=8.7	PCE=0.18

B19-16	16 Feet	TCE=0.20	PCE=0.42
B19-21	21 Feet	TCE=1.8	PCE=0.28
B19-26	26 Feet	TCE=1.5	PCE=0.28
B19-31	31 Feet	TCE=1.2	PCE=0.25
B19-36.5	36.5 Feet	TCE=0.11	PCE=ND
B19-41	41 Feet	TCE=4.0	PCE=0.16
B19-46	46 Feet	TCE=4.3	PCE=0.18

LEGEND

- MW-1 — Groundwater Monitoring Well
- B1 — Soil Boring Location
- Flood Control District Easement
- Property Line
- Union Pacific Rail Road

NOTES:
1. All locations are approximate.
2. PCE = tetrachloroethene.
3. TCE = trichloroethene
4. ND = not detected above method detection limit.
5. Soil concentrations reported in mg/kg.
6. Sample depths reported in feet below ground surface.

APPROXIMATE SCALE
0 60 120 FEET

REFERENCES:
1. EKI, 1998a, Figures 7 & 8.
(Samples Designated B2 Through B19 Collected During Phase II Soil Investigation).

2. EKI, 1998b, Table 2.
(Samples Designated MW-1 Through MW-3 Collected During Phase II Groundwater Investigation).

3. EKI, 1999, Table 2.
(Sample Designated MW-5 Collected During Additional Groundwater Investigation).

Reference: EKI, 1998a, Figure 10 (modified).

IT CORPORATION

JERVIS B. WEBB
OF CALIFORNIA

FIGURE 11
PCE AND TCE IN SOIL

JERVIS B. WEBB OF CALIFORNIA
5030 FIRESTONE BOULEVARD
SOUTH GATE, CALIFORNIA

000526

828208-B3

DRAWING NUMBER

APPROVED BY

CHECKED BY

DRAWN BY MB Miller Date

A

A'

Building slab

Clarifier area

Anodizing area

B15 SVE-3 VMP-D-2 B6 B4 B19 SVE-1 B18 SVE-D-1 VMP-1 SVE-2 VMP-D-1 B3 MW-1 B17

Ground surface

0 5 10 15 20 25 30 35 40 45 50 55 60 65

sand
silty sand
(ND)
(0.38)
clay
(0.52)
silty sand
sand
(0.14)
(1.2)
sand
sandy silt
(1.3)
(0.031)
(0.021)
(0.025)
(0.092)
(270)
(0.2)
(1.8)
(1.5)
(1.2)
(4)
(4.3)
not sampled
(0.11)
(0.61)
(16)
(0.75)
(2)
(0.056)
(2.3)
(8.7)
(0.01)
(0.034)
silty sand
sandy silt/clayey silt
clay
sandy silt/clayey silt
sand
silty sand
sandy silt
0.018
sand
0.062
0.060
(ND)
(ND)
(ND)
(ND)
(0.48)
(0.56)
(1.4)
(1.2)
(1.6)
(1.4)

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70

DEPTH BELOW GROUND SURFACE

LEGEND

▼ Approximate location of groundwater table

——— Lithologic contact

- - - - Inferred lithologic contact

(1.3) Concentration of TCE in soil (mg/kg) (Depth of sample where shown)

SCALE

0 10 20 FEET

Reference: EKI, 1998a, Figure 10 (modified).

IT CORPORATION

JERVIS B. WEBB OF CALIFORNIA

FIGURE 12

VERTICAL DISTRIBUTION OF TCE IN SOIL (SECTION A-A')

JERVIS B. WEBB OF CALIFORNIA
5030 FIRESTONE BOULEVARD
SOUTH GATE, CALIFORNIA

000527

DRAWING NUMBER 828208-B6

APPROVED BY

CHECKED BY

DRAWN BY M. Schrage 6-20-01

B

B'

East Side LA County Flood Control District Easement

Rail Road Spur

MW-3 EKI

B-16 EKI

MW-1 EKI

EKI, 1998a Fig. 10, Section A-A'

B-17 EKI

A.C.

EXISTING GROUND SURFACE

DEPTH (in feet) BELOW GROUND SURFACE

0 10 20 30 40 50 60 70 80

sm sw ml cl sp

11': PCE=ND TCE=ND
20.5': PCE=ND TCE=ND
30.5': PCE=ND TCE=ND
@43.1 bgs (EKI, 1-19-99)
@46.1 bgs (EKI, 11-21-00)
TD= 73 ft. bgs

9.5': PCE=ND TCE=ND
16': PCE=ND TCE=ND
20.5': PCE=0.027 TCE=ND
26.5': PCE=0.041 TCE=ND
31': PCE=0.047 TCE=ND
35.5': PCE=0.627 TCE=ND
40': PCE=ND TCE=0.41
46': PCE=ND TCE=0.39
51': PCE=ND TCE=1.8
TD=51.5 ft. bgs

10.5': PCE=0.021 TCE=0.013
20.5': PCE=0.023 TCE=0.062
30.5': PCE=0.011 TCE=0.060
@42.9 bgs (EKI, 2-3-99)
@45.8 bgs (EKI, 11-21-00)

6': PCE=ND TCE=ND
11': PCE=ND TCE=ND
16': PCE=ND TCE=ND
21': PCE=ND TCE=ND
26': PCE=ND TCE=0.048
31.5': PCE=ND TCE=0.056
36': PCE=ND TCE=1.4
41': PCE=ND TCE=1.2
46': PCE=ND TCE=1.6
53.5': PCE=ND TCE=1.4
TD=62 ft. bgs

LEGEND

- Approximate location of groundwater table (High and low stands)
- Lithologic contact; solid where approximate
- Inferred lithologic contact
- 51': PCE=ND TCE=1.3 — Sample, depth (bgs) and PCE/TCE concentrations (in milligrams/kilogram)
- A.C. — Asphalt / Concrete

LITHOLOGIC/USCS SYMBOLS

- cl — INORGANIC CLAYS low to medium plasticity
- ml — INORGANIC SILTS very fine sands
- sm — SILTY SANDS
- sp — Poorly graded SAND with GRAVEL
- sw — Well graded SAND with GRAVEL

SCALE 0 12 24 FEET

IT CORPORATION

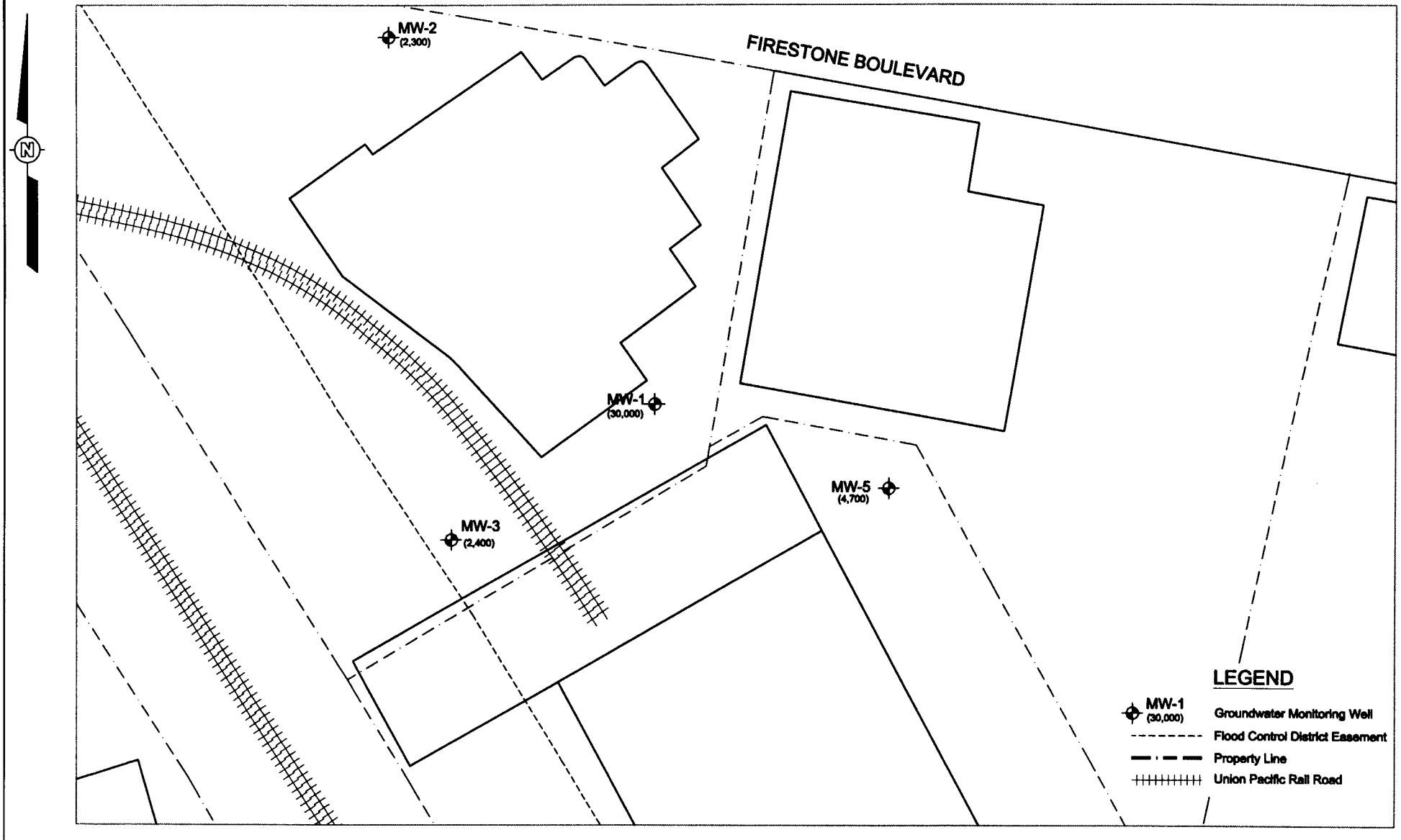
JERVIS B. WEBB OF CALIFORNIA

FIGURE 13
VERTICAL DISTRIBUTION OF PCE AND TCE IN SOIL

JERVIS B. WEBB OF CALIFORNIA
5030 FIRESTONE BOULEVARD
SOUTH GATE, CALIFORNIA

000528

DRAWN BY		CHECKED BY		APPROVED BY		DRAWING NUMBER	828208-A9
MB Miller	6-21-01						



NOTES:
1. All locations are approximate.
2. Concentrations in µg/L.

REFERENCE: EKI, 2000, Appendix B.

APPROXIMATE SCALE

0 60 120 FEET

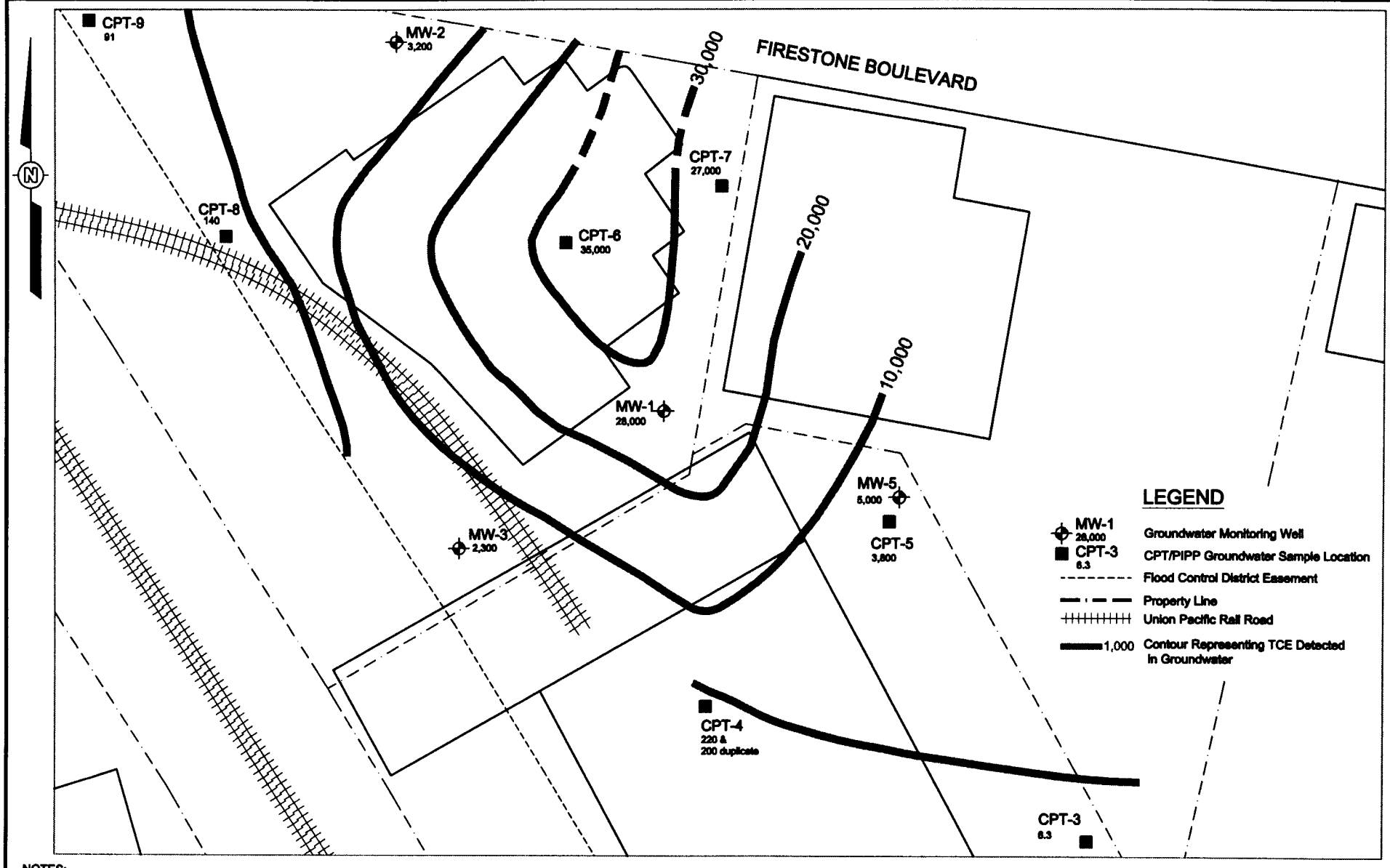
IT CORPORATION

JERVIS B. WEBB OF CALIFORNIA

FIGURE 14
TCE IN GROUNDWATER
SEPTEMBER 2000
JERVIS B. WEBB OF CALIFORNIA
5030 FIRESTONE BOULEVARD
SOUTH GATE, CALIFORNIA

000529

DRAWN BY		CHECKED BY		APPROVED BY		DRAWING NUMBER	828208-A10
MB Miller	6-21-01						



NOTES:
1. All locations are approximate.
2. Monitoring well groundwater samples - November 1998.
3. CPT groundwater samples - October 1998.
4. Contours drawn using linear interpolation.
5. Concentrations in µg/L.
6. Any "<" values contoured as half of the detection limit.

REFERENCE: EKI, 1999, Table 4 & 5.

APPROXIMATE SCALE

0 60 120 FEET

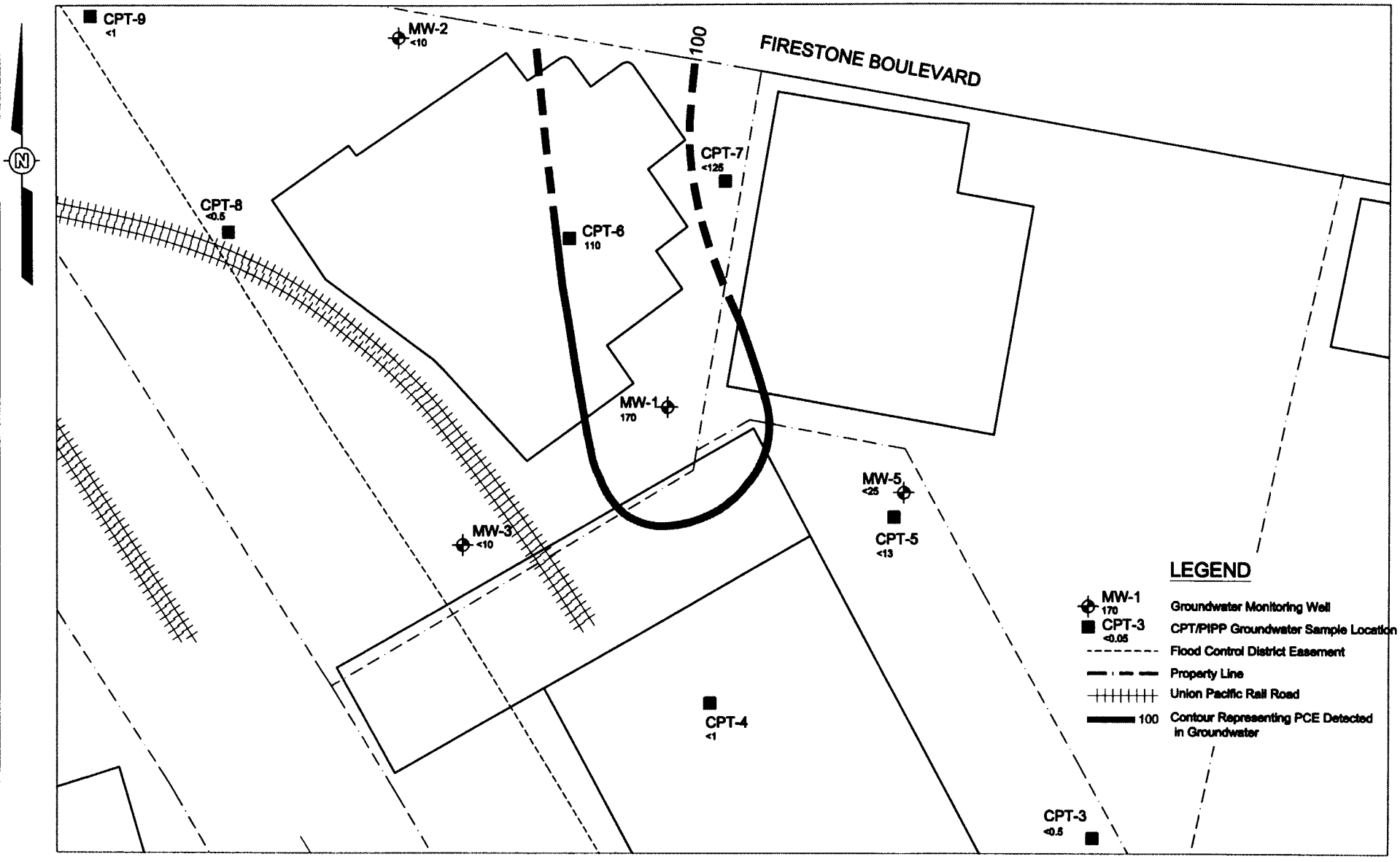
IT CORPORATION

JERVIS B. WEBB OF CALIFORNIA

FIGURE 15
TCE IN GROUNDWATER
OCTOBER/NOVEMBER 1998
JERVIS B. WEBB OF CALIFORNIA
5030 FIRESTONE BOULEVARD
SOUTH GATE, CALIFORNIA

000530

DRAWN BY		CHECKED BY		APPROVED BY		DRAWING NUMBER	828208-A11
MB Miller	6-21-01						



NOTES:
1. All locations are approximate.
2. Monitoring well groundwater samples - November 1998.
3. CPT groundwater samples - October 1998.
4. Contours drawn using linear interpolation.
5. Concentrations in µg/L.
6. Any "<" values contoured as half of the detection limit.

REFERENCE: EKI, 1999, Tables 4 & 5.

APPROXIMATE SCALE
0 60 120 FEET

IT CORPORATION

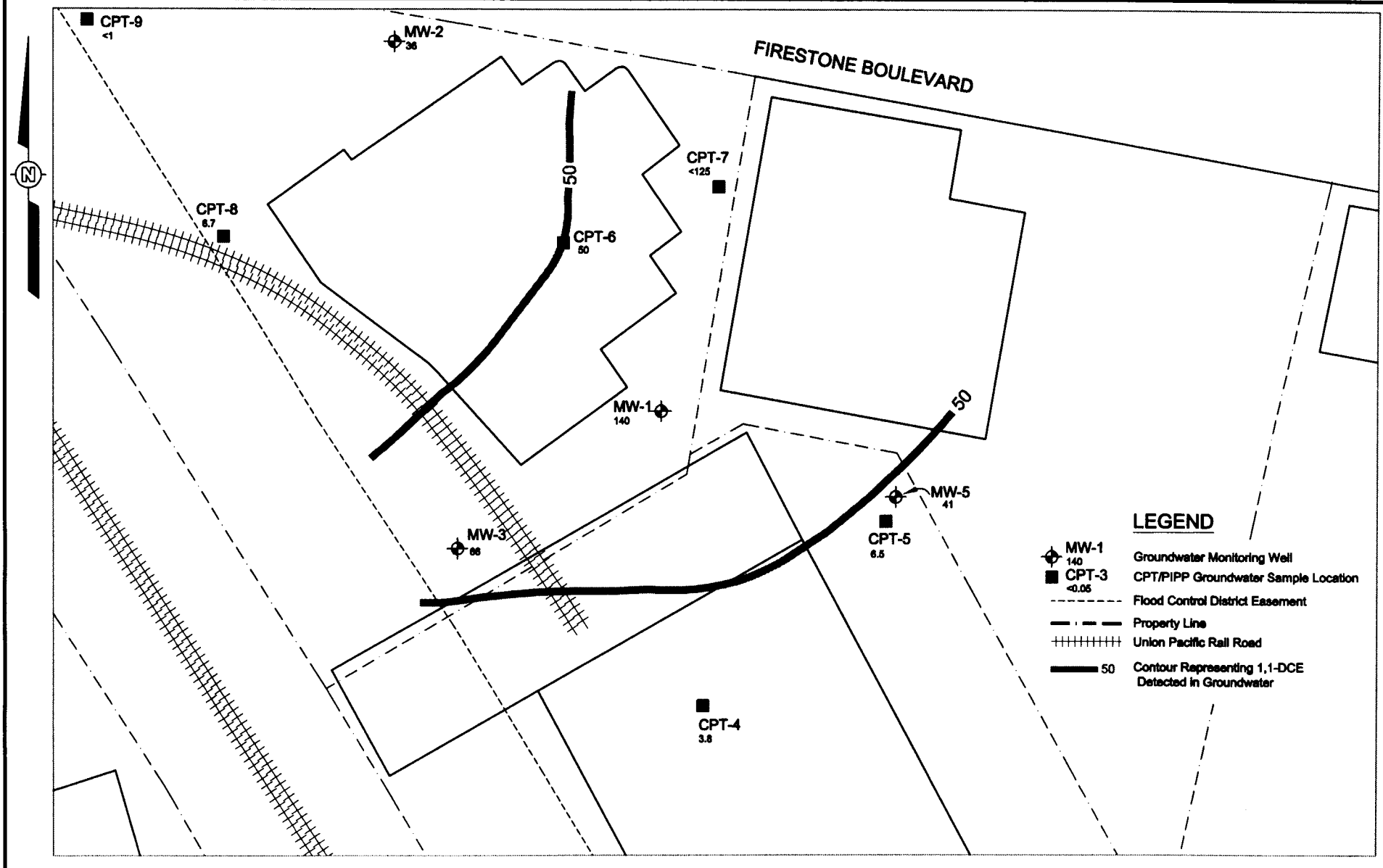
JERVIS B. WEBB OF CALIFORNIA

FIGURE 16
PCE IN GROUNDWATER OCTOBER/NOVEMBER 1998

JERVIS B. WEBB OF CALIFORNIA
5030 FIRESTONE BOULEVARD
SOUTH GATE, CALIFORNIA

000531

DRAWN BY		CHECKED BY		APPROVED BY		DRAWING NUMBER	828208-A12
MB Miller	6-21-01						



NOTES:
1. All locations are approximate.
2. Monitoring well groundwater samples - November 1998.
3. CPT groundwater samples - October 1998.
4. Contours drawn using linear interpolation.
5. Concentrations in µg/L.
6. Any "<" values contoured as half of the detection limit.
REFERENCE: EKI, 1999, Tables 4 & 5.

APPROXIMATE SCALE
0 60 120 FEET

IT CORPORATION

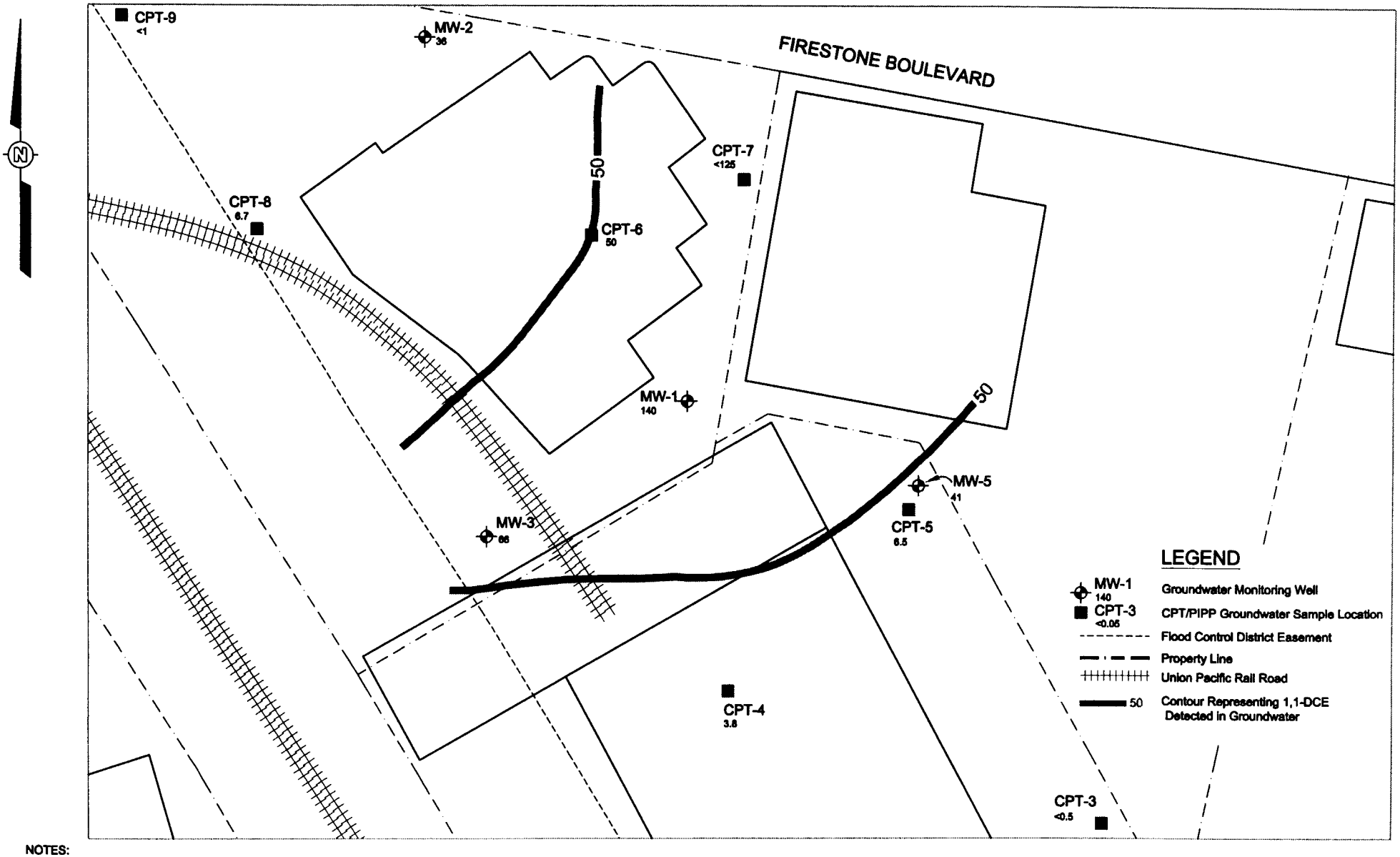
JERVIS B. WEBB OF CALIFORNIA

FIGURE 17
1,1 DCE IN GROUNDWATER OCTOBER/NOVEMBER 1998

JERVIS B. WEBB OF CALIFORNIA
5030 FIRESTONE BOULEVARD
SOUTH GATE, CALIFORNIA

000532

DRAWN BY		CHECKED BY		APPROVED BY		DRAWING NUMBER	828208-A13
MB Miller	6-21-01						



NOTES:
1. All locations are approximate.
2. Monitoring well groundwater samples - November 1998.
3. CPT groundwater samples - October 1998.
4. Contours drawn using linear interpolation.
5. Concentrations in µg/L.
6. Any "<" values contoured as half of the detection limit.

REFERENCE: EKI, 1999, Tables 4 & 5.

APPROXIMATE SCALE
0 60 120 FEET

IT CORPORATION

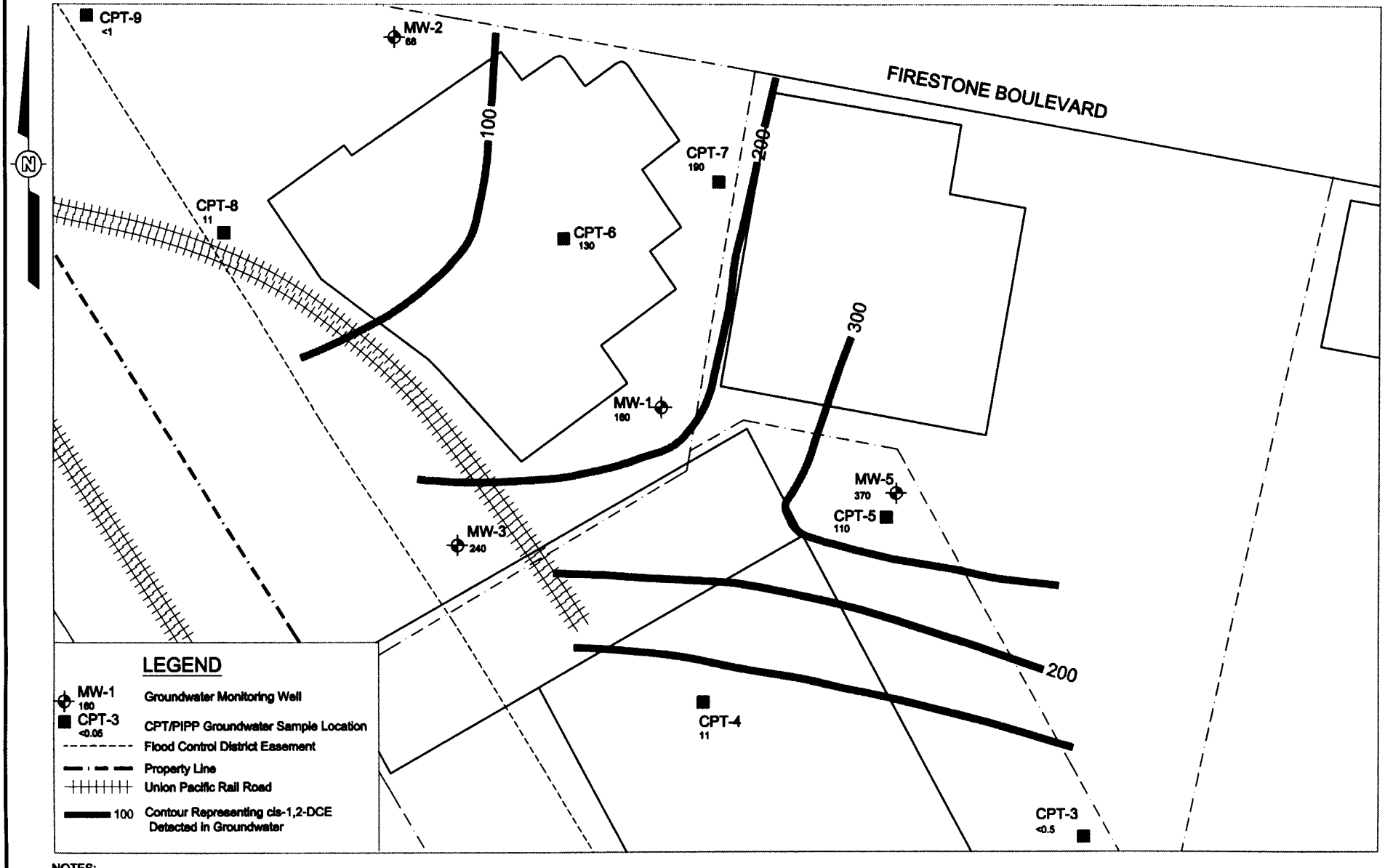
JERVIS B. WEBB OF CALIFORNIA

FIGURE 18
1,1DCA IN GROUNDWATER
OCTOBER/NOVEMBER 1998

JERVIS B. WEBB OF CALIFORNIA
5030 FIRESTONE BOULEVARD
SOUTH GATE, CALIFORNIA

000533

DRAWN BY		CHECKED BY		APPROVED BY		DRAWING NUMBER	828208-A14
MB Miller	6-21-01						



NOTES:
1. All locations are approximate.
2. Monitoring well groundwater samples - November 1998.
3. CPT groundwater samples - October 1998.
4. Contours drawn using linear interpolation.
5. Concentrations in µg/L.
6. Any "<" values contoured as half of the detection limit.

REFERENCE: EKI, 1999, Tables 4 & 5.

APPROXIMATE SCALE
0 60 120 FEET

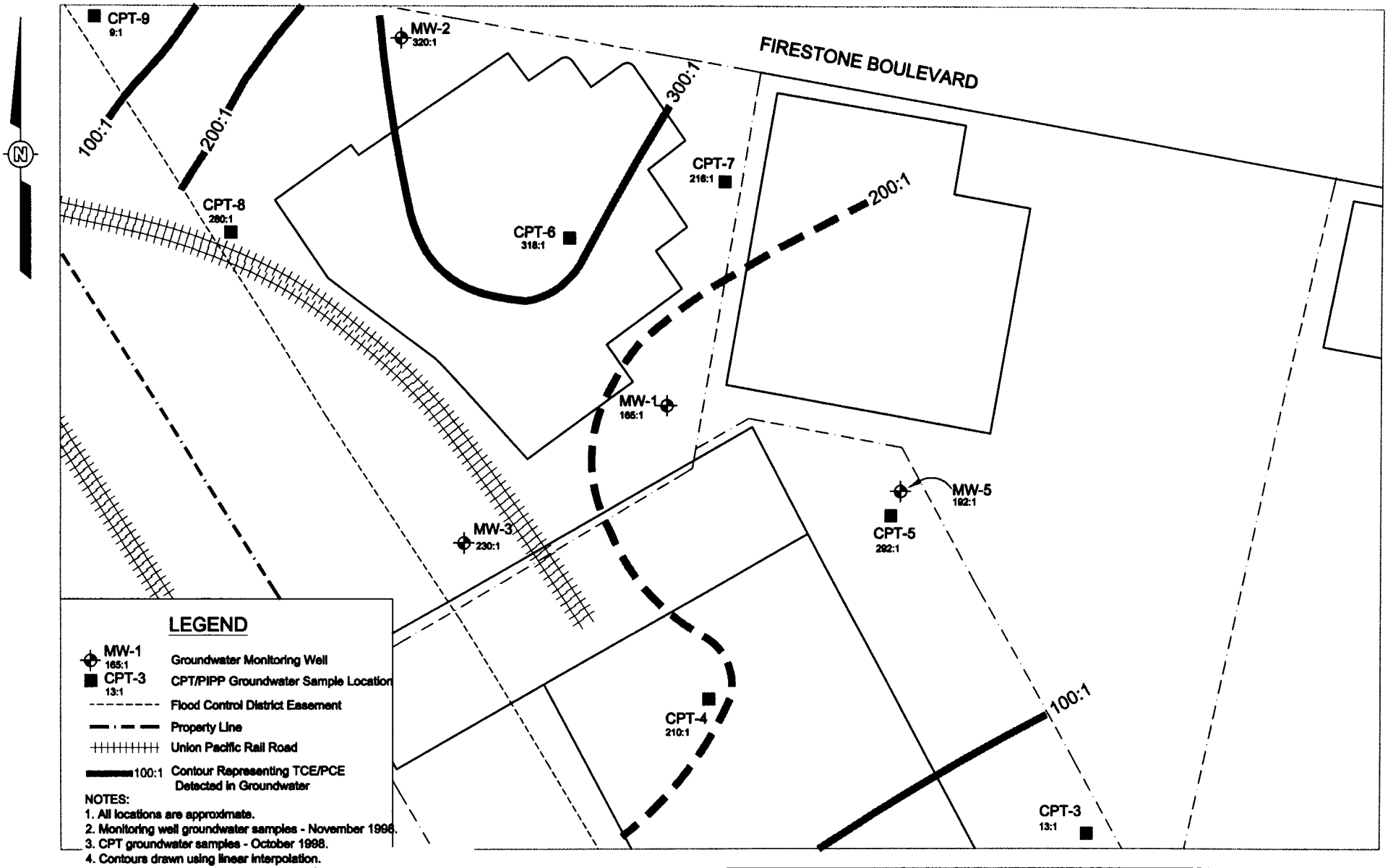
IT CORPORATION

JERVIS B. WEBB OF CALIFORNIA

FIGURE 19
cis-1,2-DCE IN GROUNDWATER
OCTOBER/NOVEMBER 1998

JERVIS B. WEBB OF CALIFORNIA
5030 FIRESTONE BOULEVARD
SOUTH GATE, CALIFORNIA

DRAWN BY		CHECKED BY		APPROVED BY		DRAWING NUMBER	828208-A15
MB Miller	6-21-01						



IT CORPORATION

JERVIS B. WEBB OF CALIFORNIA

FIGURE 20
TCE/PCE RATIO IN GROUNDWATER
OCTOBER/NOVEMBER 1998

JERVIS B. WEBB OF CALIFORNIA
5030 FIRESTONE BOULEVARD
SOUTH GATE, CALIFORNIA

000535

DRAWING NUMBER	APPROVED BY	CHECKED BY	DRAWN BY	Date
828208-B5			MB Miller	

B2-5.5	5.5 Feet	TCE=0.007	PCE=0.018
B9-10.5	10.5 Feet	TCE=ND	PCE=0.045

B3-6	6 Feet	TCE=0.010	PCE=0.042
B3-11	11 Feet	TCE=0.034	PCE=0.12

B4-6	6 Feet	TCE=0.021	PCE=0.076
B4-16	16 Feet	TCE=0.092	PCE=2.2
B4-20.5	20.5 Feet	TCE=270	PCE=140

B5-6	6 Feet	TCE=0.005	PCE=0.025
B5-10.5	10.5 Feet	TCE=0.19	PCE=0.065

B6-6	6 Feet	TCE=0.031	PCE=0.13
B6-10.5	10.5 Feet	TCE=0.025	PCE=0.019

B7-6	6 Feet	TCE=0.019	PCE=0.055
B7-11	11 Feet	TCE=ND	PCE=ND

B8-6	6 Feet	TCE=ND	PCE=0.003
B8-11	11 Feet	TCE=0.050	PCE=0.041

B9-5.5	5.5 Feet	TCE=ND	PCE=0.004
B9-10.5	10.5 Feet	TCE=0.041	PCE=0.022

B10-6	6 Feet	TCE=0.006	PCE=0.027
B10-11	11 Feet	TCE=0.036	PCE=ND

B11-6	6 Feet	TCE=0.016	PCE=0.061
B11-11	11 Feet	TCE=0.035	PCE=ND

B12-6	6 Feet	TCE=ND	PCE=ND

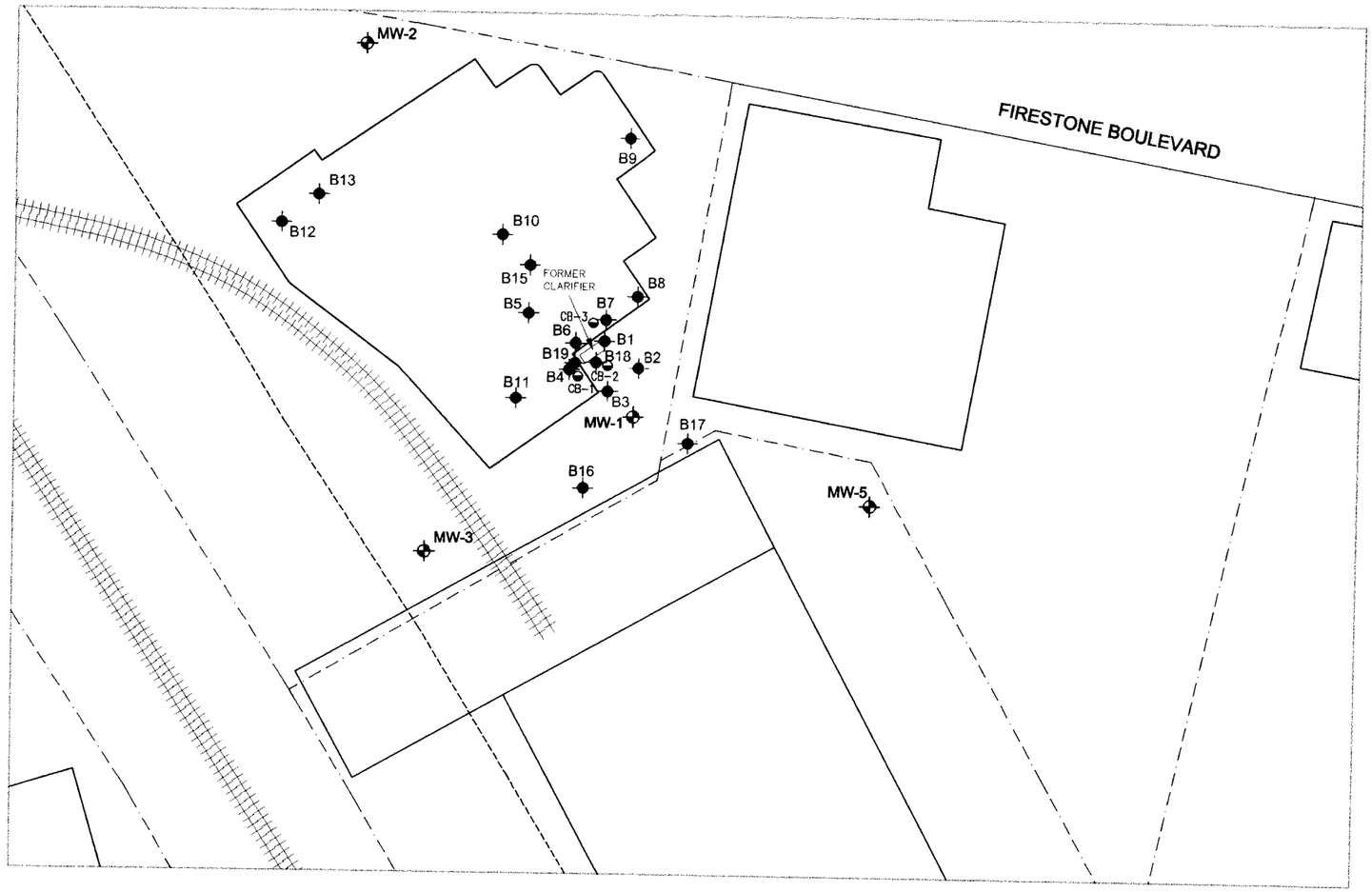
B13-6	6 Feet	TCE=ND	PCE=ND

MW-1	10.5 Feet	TCE=0.018	PCE=0.021
MW-1	20.5 Feet	TCE=0.062	PCE=0.023
MW-1	30.5 Feet	TCE=0.060	PCE=0.011

MW-2	10.5 Feet	TCE=<0.005	PCE=<0.005
MW-2	20.5 Feet	TCE=<0.005	PCE=<0.005
MW-2	30.5 Feet	TCE=<0.005	PCE=<0.005

MW-3	11 Feet	TCE=<0.005	PCE=<0.005
MW-3	20.5 Feet	TCE=<0.005	PCE=<0.005
MW-3	30.5 Feet	TCE=<0.005	PCE=<0.005

MW-5	21 Feet	TCE=0.022	PCE=<0.0025
MW-5	31 Feet	TCE=0.011	PCE=<0.0025
MW-5	41 Feet	TCE=0.55	PCE=<0.050



B15-10	10 Feet	TCE=ND	PCE=ND
B15-16	16 Feet	TCE=ND	PCE=ND
B15-20.5	20.5 Feet	TCE=ND	PCE=ND
B15-26.5	26.5 Feet	TCE=0.38	PCE=0.054
B15-31	31 Feet	TCE=0.52	PCE=0.041
B15-35.5	35.5 Feet	TCE=0.14	PCE=0.026
B15-40	40 Feet	TCE=1.2	PCE=ND
B15-44.5	44.5 Feet	TCE=1.3	PCE=ND

B16-6	9.5 Feet	TCE=ND	PCE=ND
B16-11	16 Feet	TCE=ND	PCE=ND
B16-16	20.5 Feet	TCE=ND	PCE=0.027
B16-21	26.5 Feet	TCE=ND	PCE=0.041
B16-26	31 Feet	TCE=ND	PCE=0.047
B16-31	35.5 Feet	TCE=ND	PCE=0.027
B16-35.5	40 Feet	TCE=ND	PCE=ND
B16-41	44.5 Feet	TCE=0.41	PCE=ND
B16-46	46 Feet	TCE=0.39	PCE=ND
B16-51	51 Feet	TCE=1.3	PCE=ND

B17-6	6 Feet	TCE=ND	PCE=ND
B17-11	11 Feet	TCE=ND	PCE=ND
B17-16	16 Feet	TCE=ND	PCE=ND
B17-21	21 Feet	TCE=ND	PCE=ND
B17-26	26 Feet	TCE=0.048	PCE=ND
B17-31.5	31.5 Feet	TCE=0.056	PCE=ND
B17-36	36 Feet	TCE=1.4	PCE=ND
B17-41	41 Feet	TCE=1.2	PCE=ND
B17-46	46 Feet	TCE=1.6	PCE=ND
B17-53.5	53.5 Feet	TCE=1.4	PCE=ND

B18-11	11 Feet	TCE=0.11	PCE=0.40
B18-16	16 Feet	TCE=0.61	PCE=0.37
B18-21	21 Feet	TCE=16	PCE=0.66
B18-27	27 Feet	TCE=0.75	PCE=0.093
B18-31	31 Feet	TCE=2.0	PCE=0.14
B18-36	36 Feet	TCE=0.056	PCE=ND
B18-41	41 Feet	TCE=2.3	PCE=0.091
B18-46	46 Feet	TCE=8.7	PCE=0.18

B19-16	16 Feet	TCE=0.20	PCE=0.42
B19-21	21 Feet	TCE=1.8	PCE=0.28
B19-26	26 Feet	TCE=1.5	PCE=0.28
B19-31	31 Feet	TCE=1.2	PCE=0.25
B19-36.5	36.5 Feet	TCE=0.11	PCE=ND
B19-41	41 Feet	TCE=4.0	PCE=0.16
B19-46	46 Feet	TCE=4.3	PCE=0.18

LEGEND

- MW-1 Groundwater Monitoring Well
- B1 Soil Boring Location
- CB-1 Confirmation Soil Boring
- Flood Control District Easement
- Property Line
- Union Pacific Rail Road

NOTES:
1. All locations are approximate.
2. PCE = tetrachloroethene.
3. TCE = trichloroethene
4. ND = not detected above method detection limit.
5. Soil concentrations reported in mg/kg.
6. Sample depths reported in feet below ground surface.

REFERENCES:
1. EKI, 1998a, Figures 7 & 8.
   (Samples Designated B2 Through B19 Collected During Phase II Soil Investigation).
2. EKI, 1998b, Table 2.
   (Samples Designated MW-1 Through MW-3 Collected During Phase II Groundwater Investigation).
3. EKI, 1999, Table 2.
   (Sample Designated MW-5 Collected During Additional Groundwater Investigation).

Reference: EKI, 1998a, Figure 10 (modified).

APPROXIMATE SCALE
0 60 120 FEET

IT CORPORATION

JERVIS B. WEBB OF CALIFORNIA

FIGURE 21
PROPOSED CONFIRMATION SOIL BORING LOCATIONS
JERVIS B. WEBB OF CALIFORNIA
5030 FIRESTONE BOULEVARD
SOUTH GATE, CALIFORNIA

000536

APPENDIX A

91B-2-99

APPENDIX A

VISTA INFORMATION SOLUTIONS, INC.
SITE ASSESSMENT REPORT

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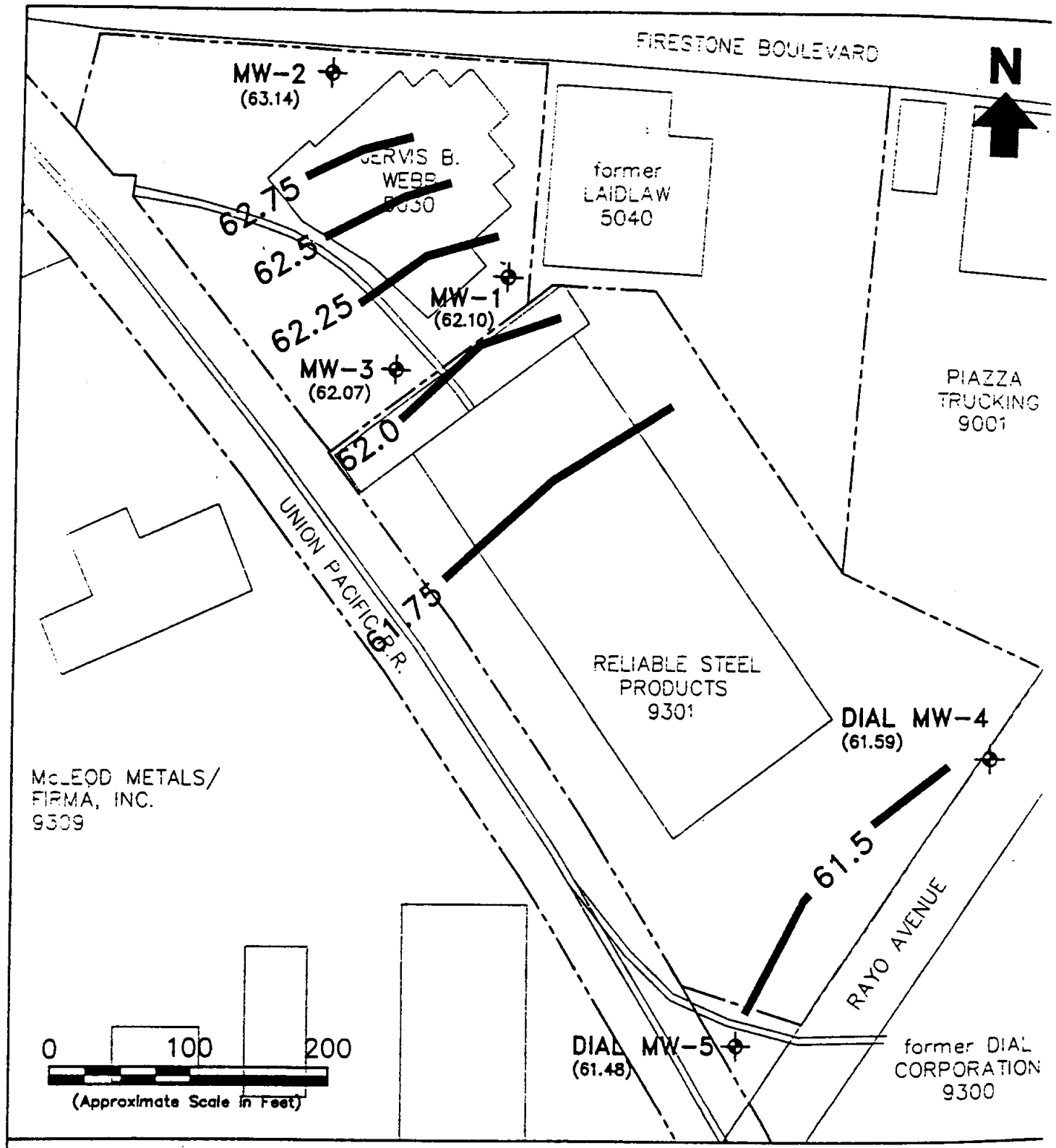
APPENDIX
B

APPENDIX B

EKI Groundwater Contour Maps
(May 1998 - Dec 2000)



LEGEND

Contour Representing the Elevation of the Groundwater Table in Feet Above Mean Sea Level

Groundwater Monitoring Well

Property Line/Boundary

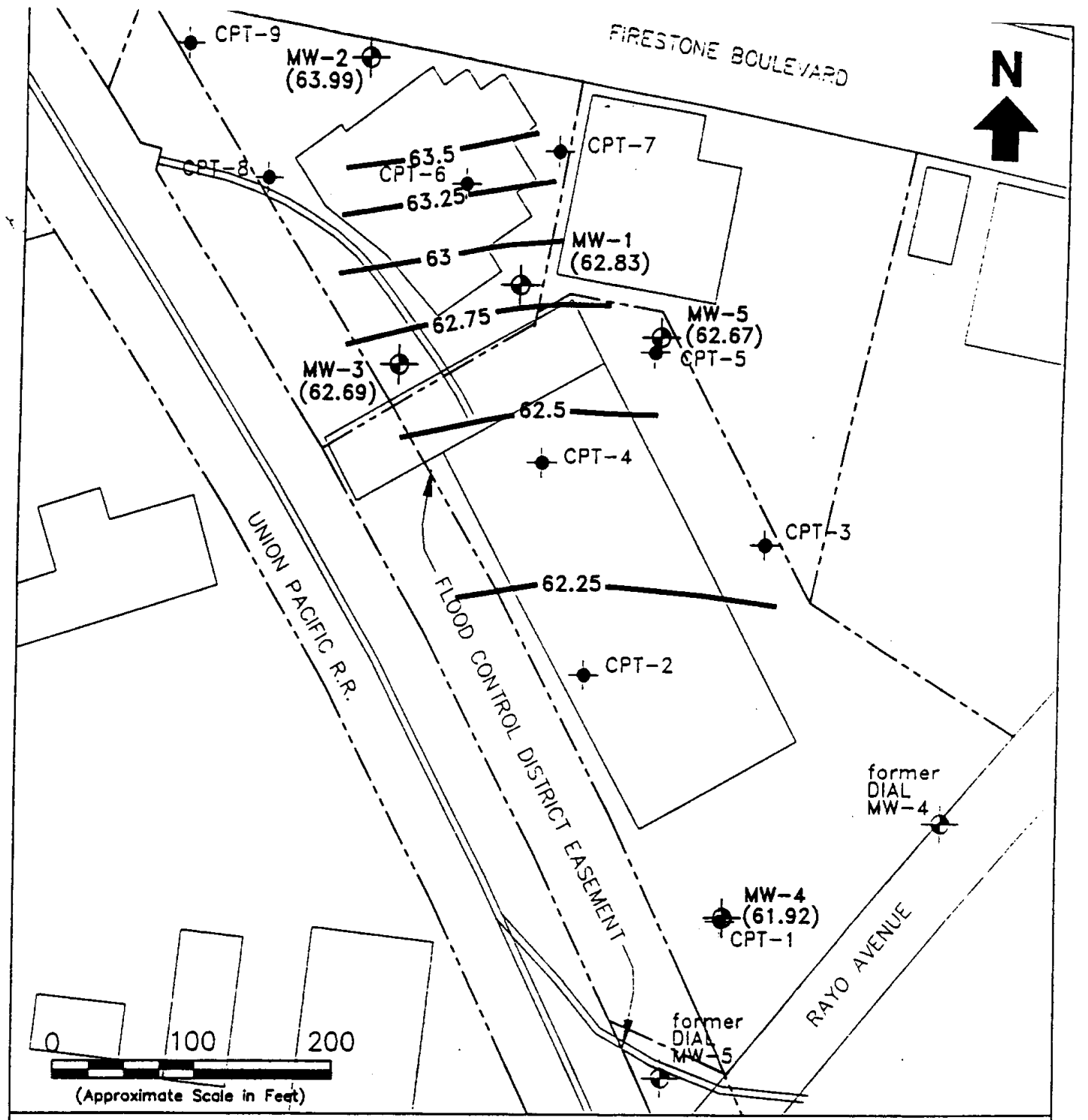
Notes:

1. All locations are approximate.

Erler & Kalinowski, Inc.

Elevation of the Groundwater Table on 20 May 1998

Jervis B. Webb Company
South Gate, California
June 1998
EKI 961025.02
Figure 3
000614



LEGEND

- Contour Representing the Elevation of the Groundwater Table in Feet Above Mean Sea Level (msl)
- MW-3 (62.61) — Groundwater Monitoring Well with Groundwater Elevation (msl)
- Former DIAL Monitoring Well
- PIPP Groundwater Sample Location
- Property Line/Boundary

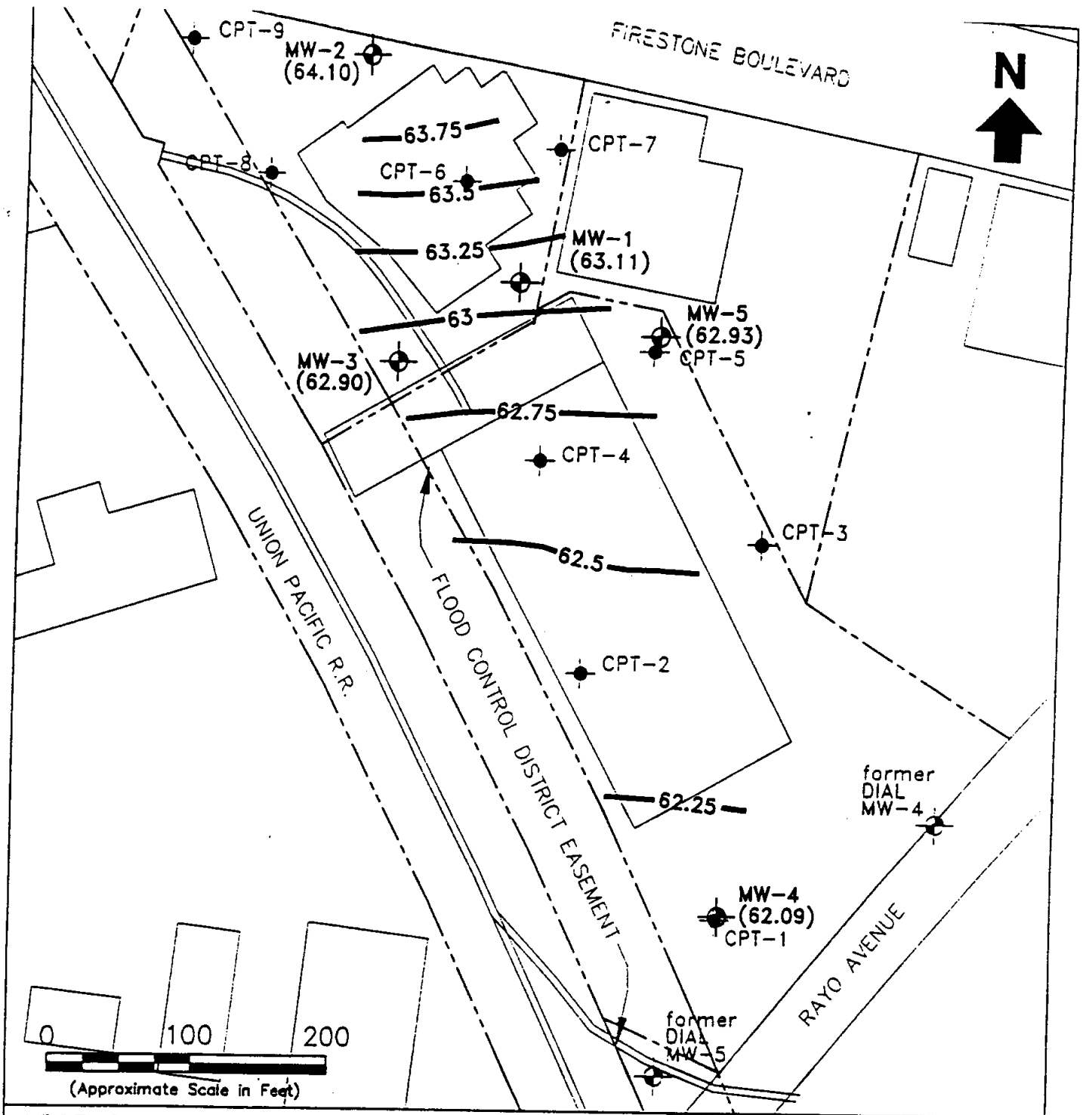
Notes:

1. All locations are approximate.
2. Information related to PIPP groundwater sampling and monitoring at the former DIAL wells is provided in Additional Groundwater Investigation and Quarterly Monitoring Report, by Erler & Kalinowski, Inc., dated 13 January 1999 and Adjacent Property Review report, by Emcon Associates, dated 2 November 1995, respectively.

Erler & Kalinowski, Inc.

Elevation of the Groundwater Table On 19 January 1999

Jervis B. Webb Company
South Gate, California
June 1999
EKI 961025.02
Figure 3



LEGEND

- Contour Representing the Elevation of the Groundwater Table in Feet Above Mean Sea Level (msl)
- MW-3 (62.61) — Groundwater Monitoring Well with Groundwater Elevation (msl)
- Former DIAL Monitoring Well
- PIPP Groundwater Sample Location
- Property Line/Boundary

Notes:

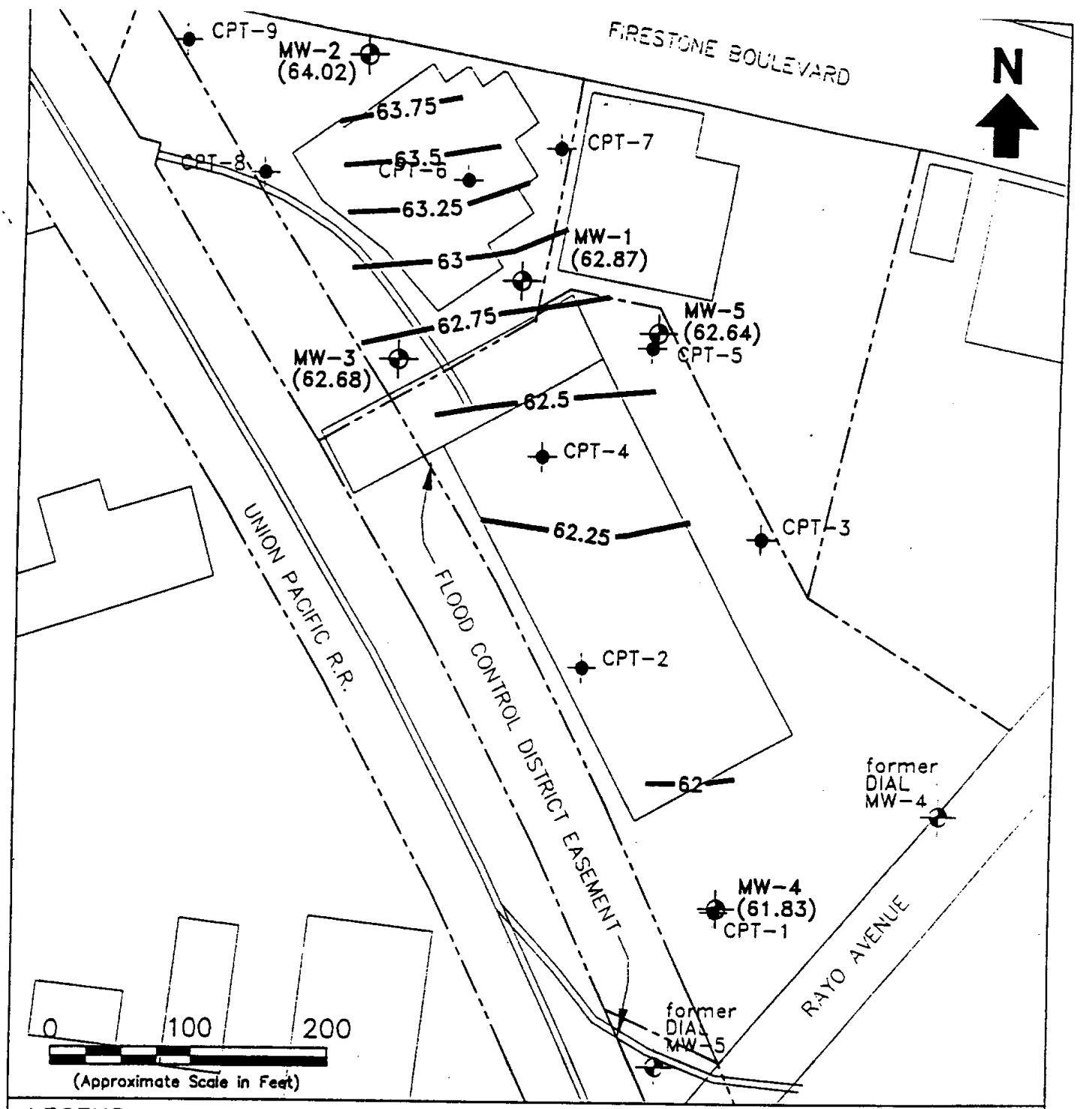
1. All locations are approximate.
2. Information related to PIPP groundwater sampling and monitoring at the former DIAL wells is provided in Additional Groundwater Investigation and Quarterly Monitoring Report, by Erler & Kalinowski, Inc., dated 13 January 1999 and Adjacent Property Review report, by Emcon Associates, dated 2 November 1995, respectively.

Erler & Kalinowski, Inc.

Elevation of the Groundwater Table On 3 February 1999

Jervis B. Webb Company
South Gate, California
June 1999
EKI 961025.02

Figure 4



LEGEND

- Contour Representing the Elevation of the Groundwater Table in Feet Above Mean Sea Level (msl)
- MW-3 (62.61) — Groundwater Monitoring Well with Groundwater Elevation (msl)
- Former DIAL Monitoring Well
- PIPP Groundwater Sample Location
- Property Line/Boundary

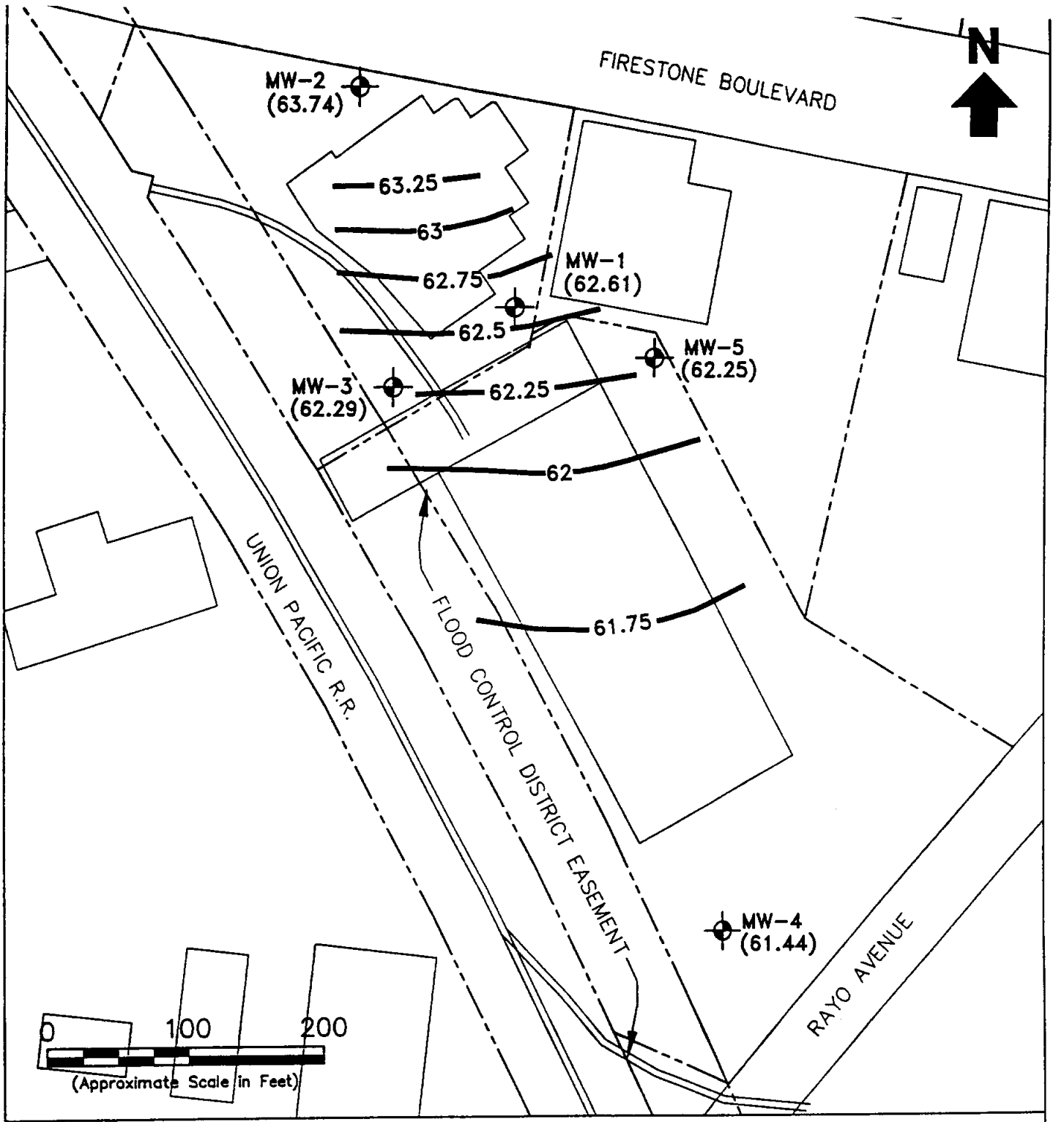
Erler & Kalinowski, Inc.

Elevation of the Groundwater Table On 30 March 1999

Jervis B. Webb Company
South Gate, California
June 1999
EKI 961025.02
Figure 5

Notes:

1. All locations are approximate.
2. Information related to PIPP groundwater sampling and monitoring at the former DIAL wells is provided in Additional Groundwater Investigation and Quarterly Monitoring Report, by Erler & Kalinowski, Inc., dated 13 January 1999 and Adjacent Property Review report, by Emcon Associates, dated 2 November 1995, respectively.



LEGEND

Contour Representing the Elevation of the Groundwater Table in Feet Above Mean Sea Level (msl)

MW-3 (62.61) Groundwater Monitoring Well with Groundwater Elevation (msl)

Property Line/Boundary

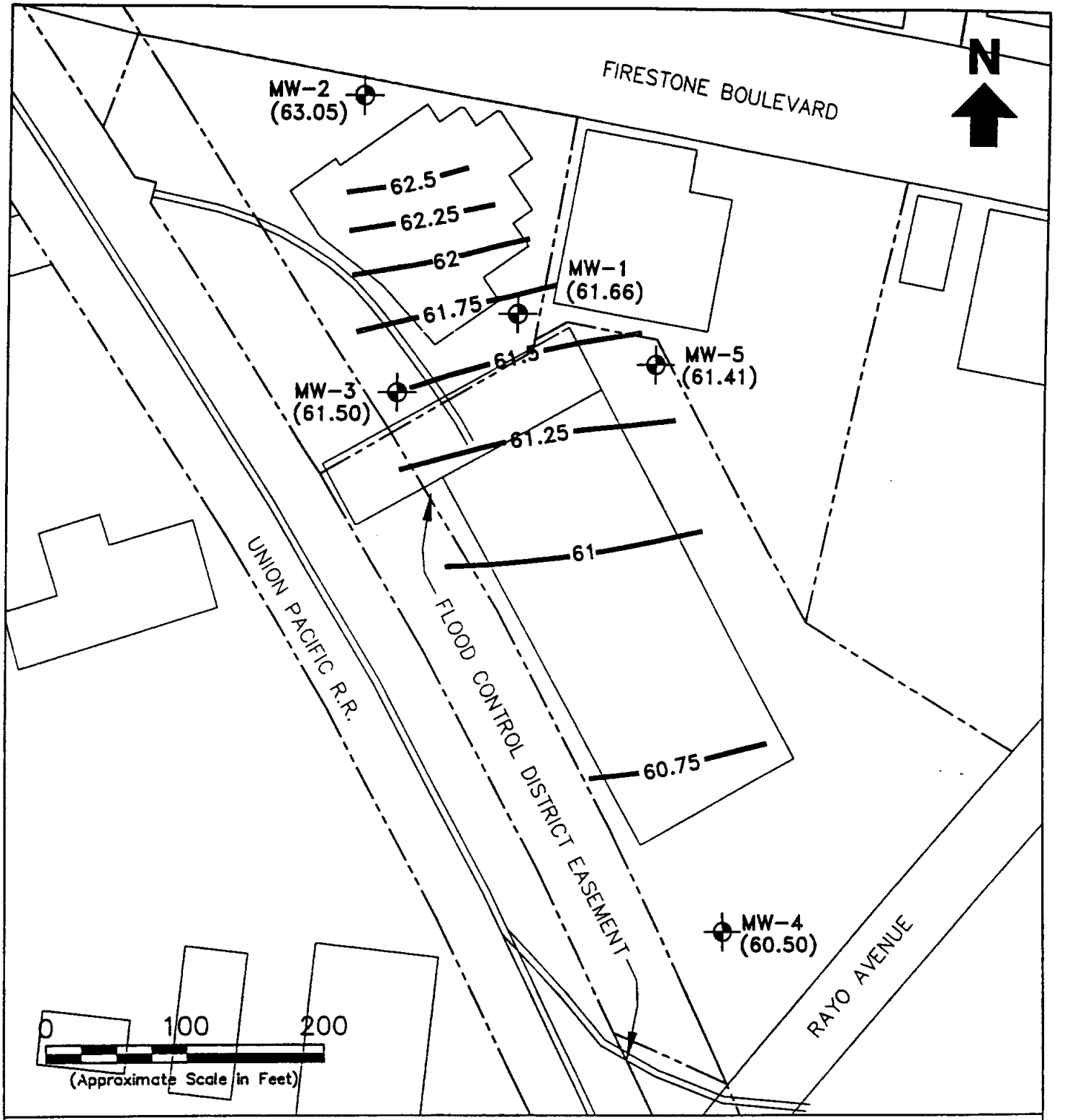
Notes:

1. All locations are approximate.

Erler & Kalinowski, Inc.

Elevation of the Groundwater Table on 1 June 1999

Jervis B. Webb Company
South Gate, California
July 1999
EKI 961025.04
Figure 3



LEGEND

Contour Representing the Elevation of the Groundwater Table in Feet Above Mean Sea Level (msl)

MW-3 (62.61) Groundwater Monitoring Well with Groundwater Elevation (msl)

Property Line/Boundary

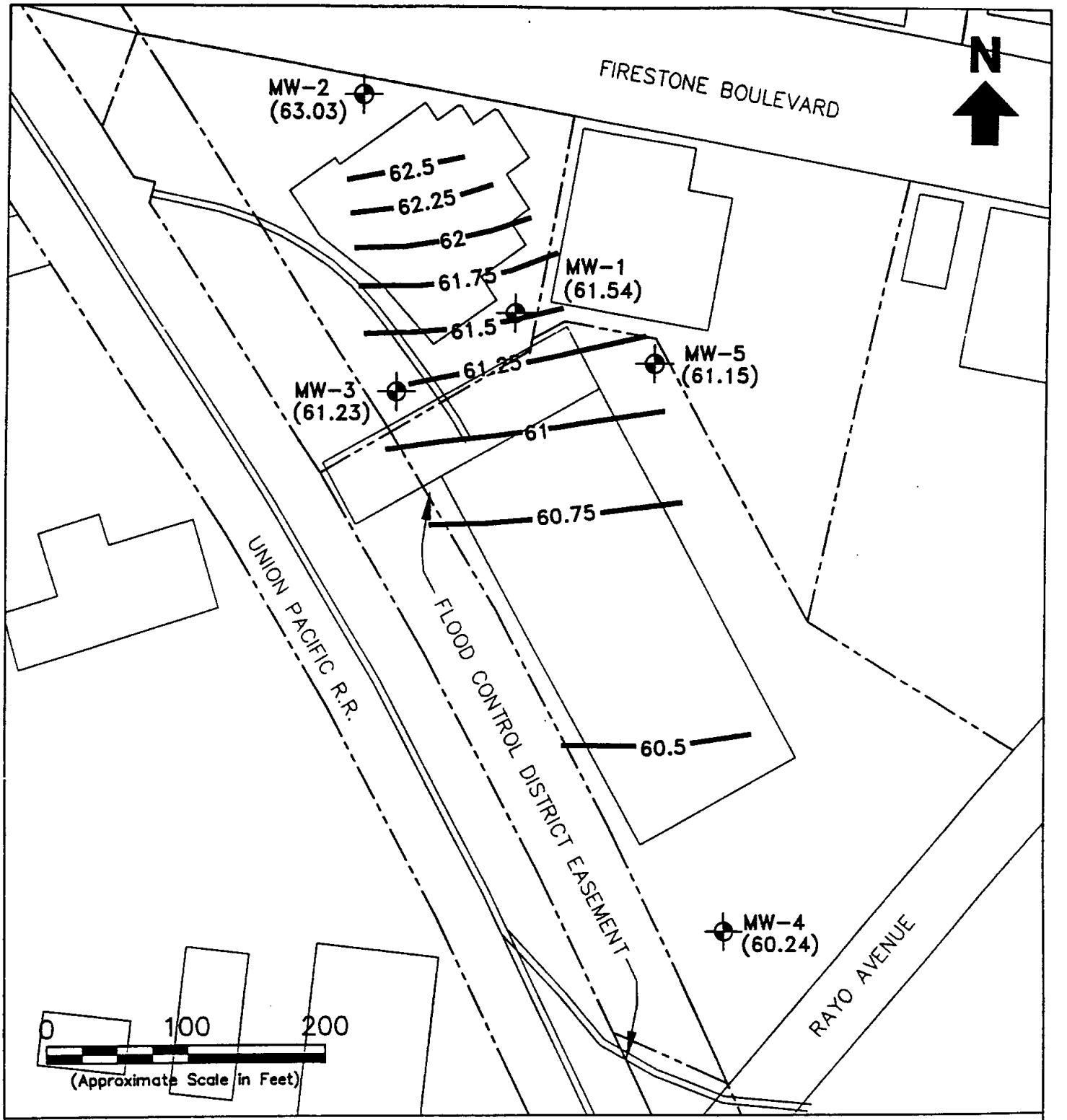
Notes:

1. All locations are approximate.

Erler & Kalinowski, Inc.

Elevation of the Groundwater Table on 18 October 1999

Jervis B. Webb Company of California
South Gate, California
February 2000
EKI 991103.01
Figure 3



LEGEND

Contour Representing the Elevation of the Groundwater Table in Feet Above Mean Sea Level (msl)

MW-3 (62.61) Groundwater Monitoring Well with Groundwater Elevation (msl)

Property Line/Boundary

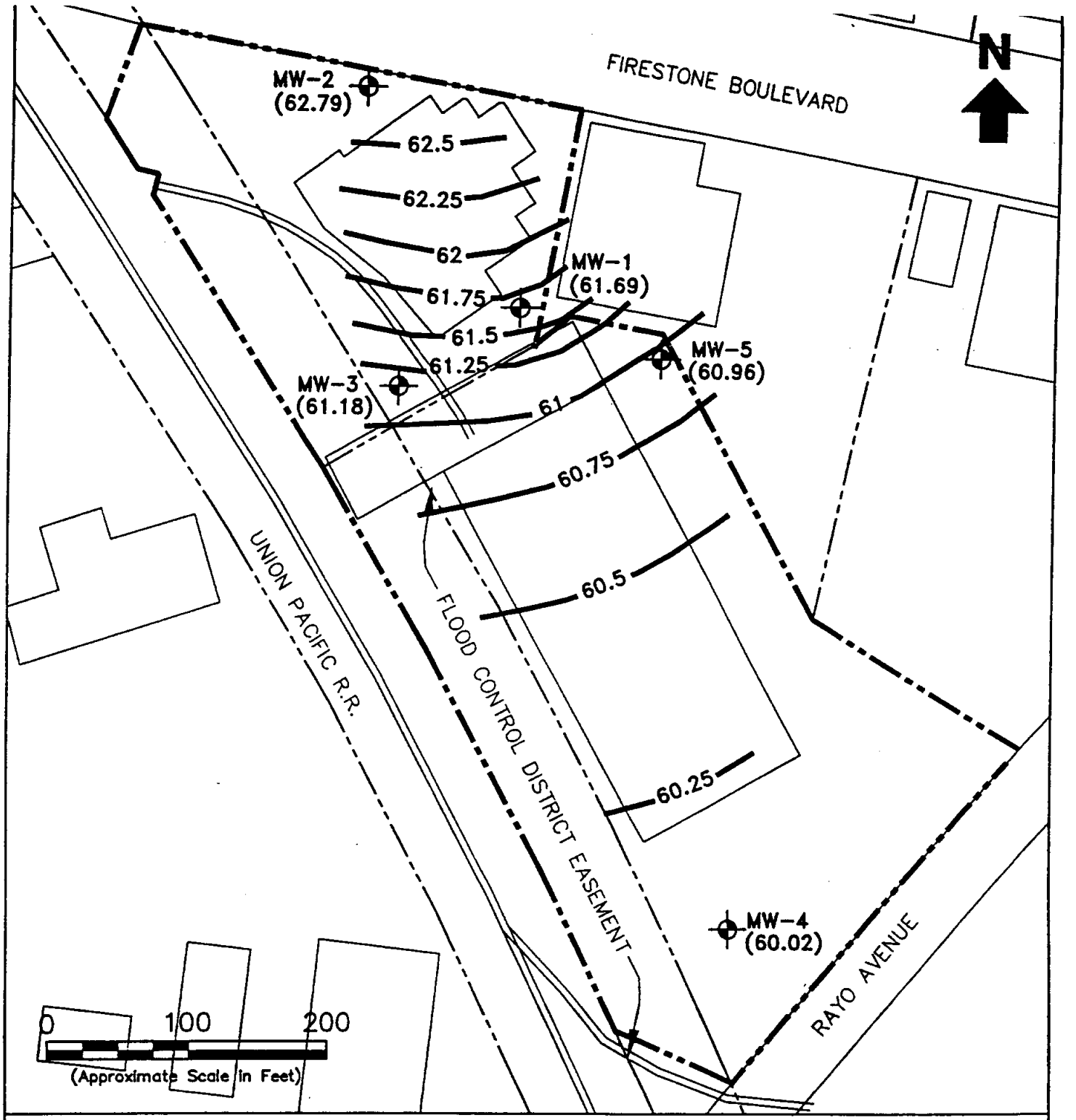
Notes:

1. All locations are approximate.

Erler & Kalinowski, Inc.

Elevation of the Groundwater Table on 8 December 1999

Jervis B. Webb Company of California
South Gate, California
February 2000
EKI 991103.01
Figure 4



LEGEND

- Contour Representing the Elevation of the Groundwater Table in Feet Above Mean Sea Level (msl)
- MW-3 (62.61) Groundwater Monitoring Well with Groundwater Elevation (msl)
- Property Line/Site Boundary

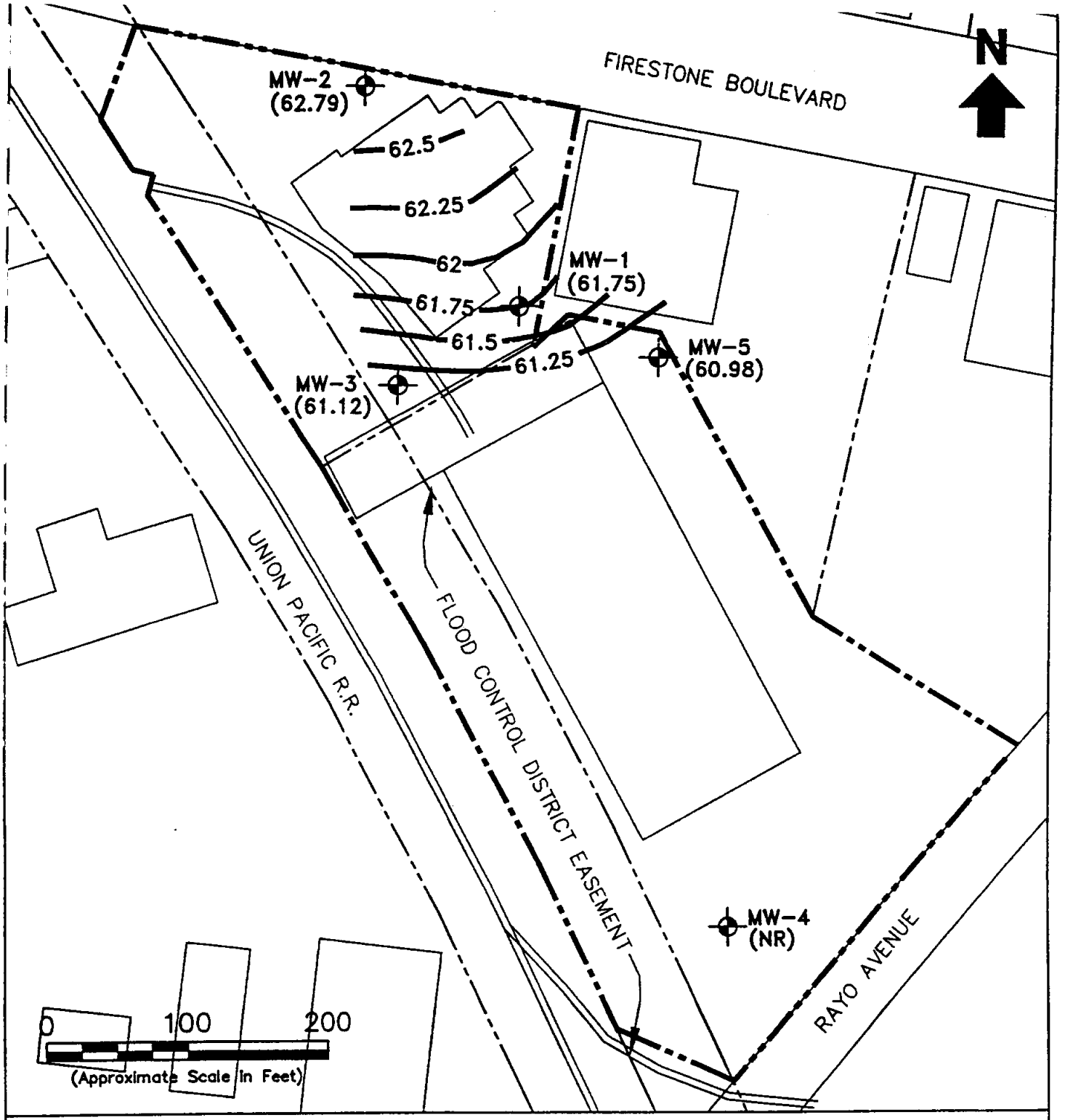
Notes:

1. All locations are approximate.

Erler & Kalinowski, Inc.

Elevation of the Groundwater Table on 27 January 2000

Jervis B. Webb Company of California
South Gate, California
April 2000
EKI 991103.01
Figure 3



LEGEND

Contour Representing the Elevation of the Groundwater Table in Feet Above Mean Sea Level (msl)

MW-3 (62.61) Groundwater Monitoring Well with Groundwater Elevation (msl)

Property Line/Site Boundary

Notes:

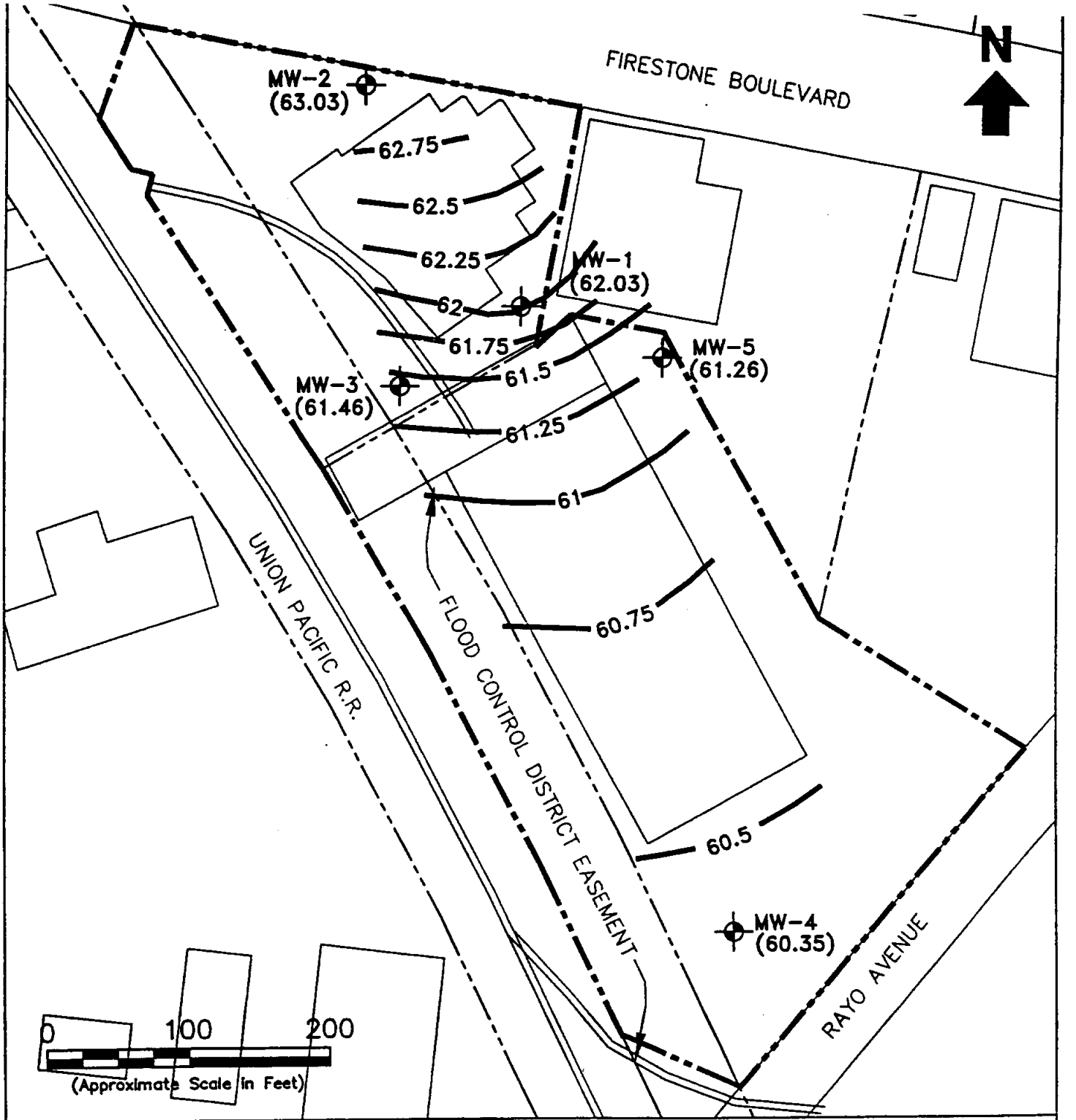
1. All locations are approximate.

Erler & Kalinowski, Inc.

Elevation of the Groundwater Table on 28 February 2000

Jervis B. Webb Company of California
South Gate, California
April 2000
EKI 991103.01

Figure 4



LEGEND

Contour Representing the Elevation of the Groundwater Table in Feet Above Mean Sea Level (msl)

MW-3 (62.61) Groundwater Monitoring Well with Groundwater Elevation (msl)

Property Line/Site Boundary

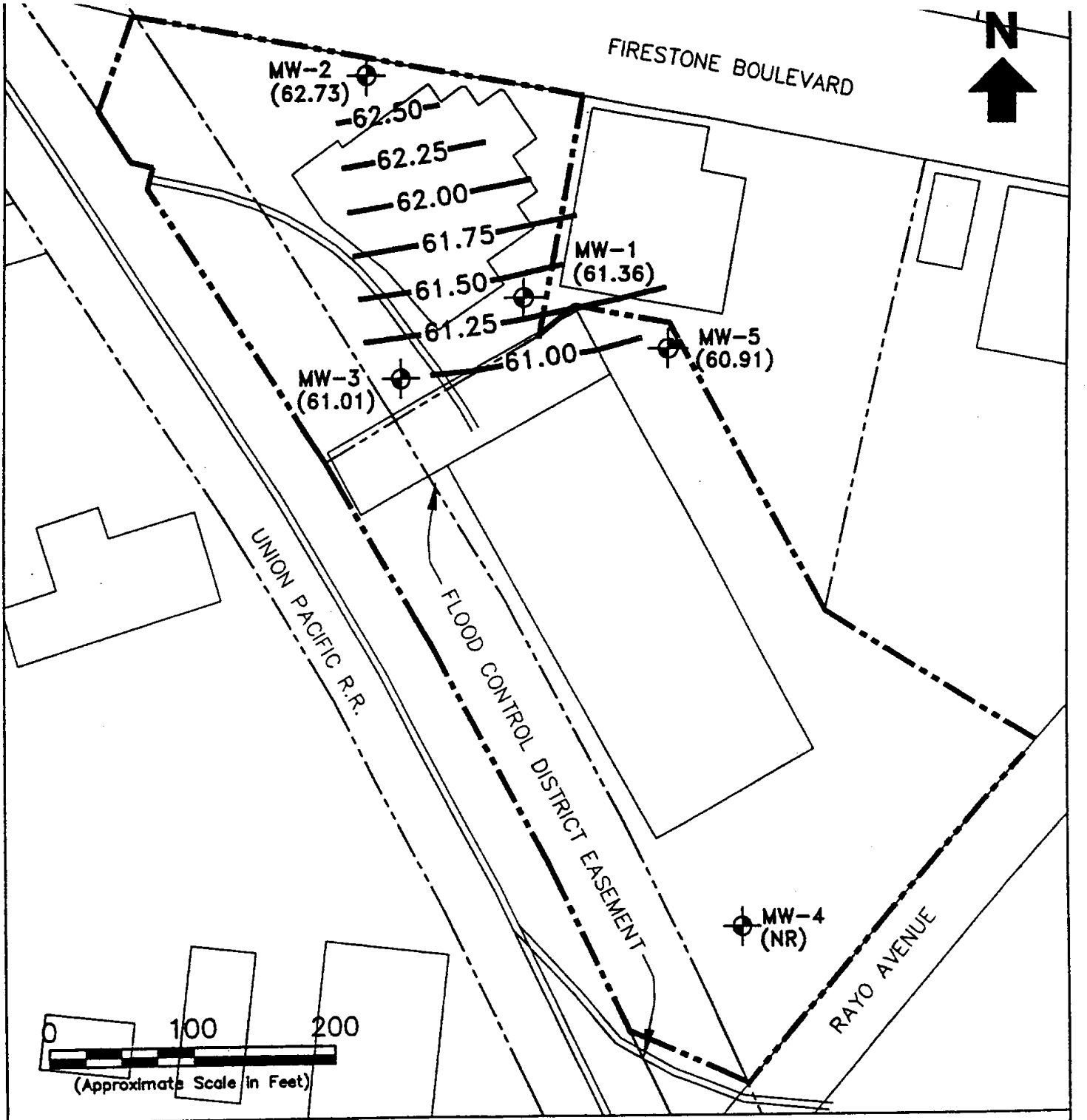
Notes:

1. All locations are approximate.

Erler & Kalinowski, Inc.

Elevation of the Groundwater Table on 15 March 2000

Jervis B. Webb Company of California
South Gate, California
April 2000
EKI 991103.01
Figure 5



LEGEND

Contour Representing the Elevation of the Groundwater Table in Feet Above Mean Sea Level (msl)

MW-3 (62.61) Groundwater Monitoring Well with Groundwater Elevation (msl)

Property Line/Site Boundary

Notes:

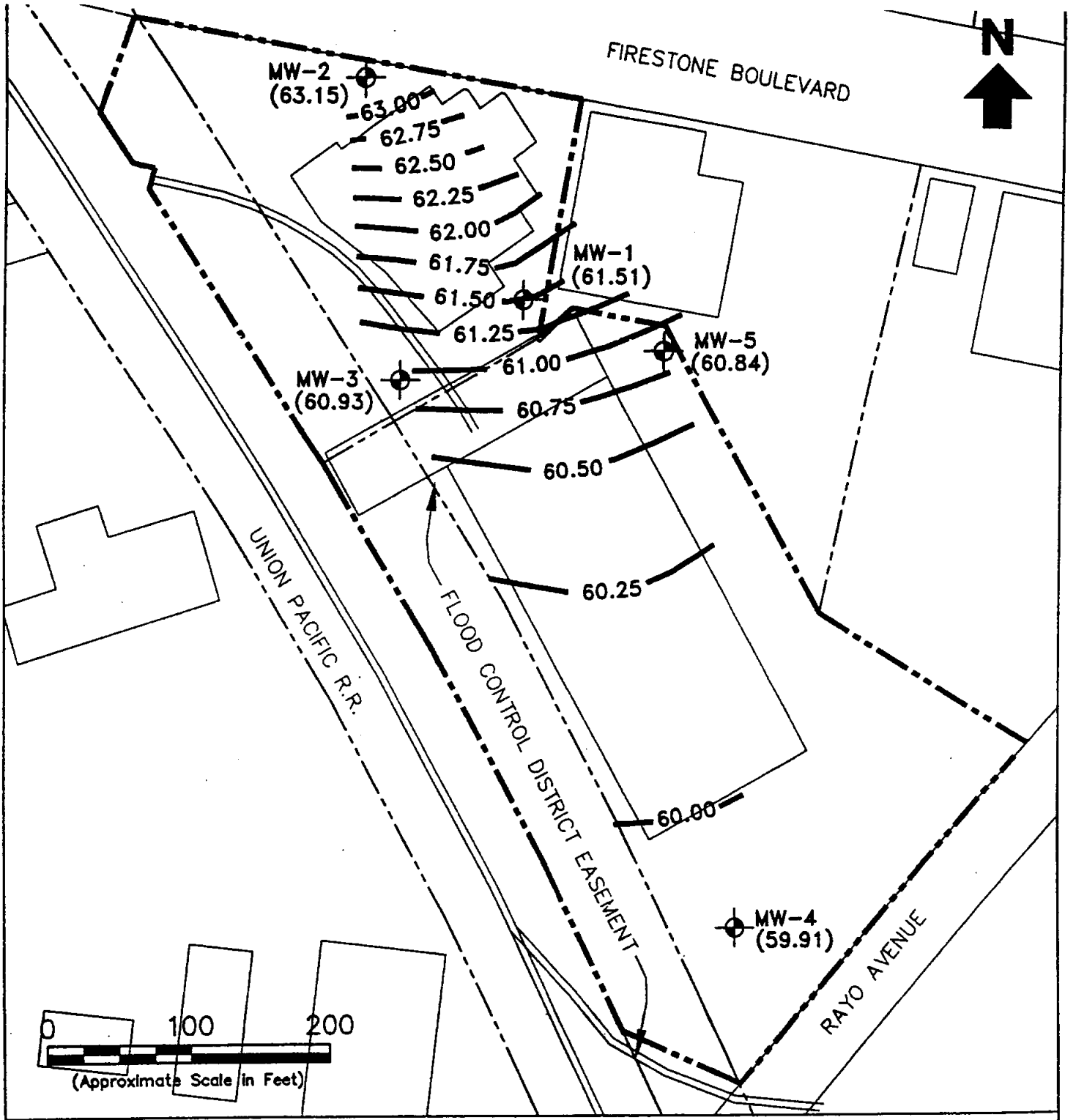
1. All locations are approximate.
2. NR = Not Recorded

Erler & Kalinowski, Inc.

Elevation of the Groundwater Table on 13 April 2000

Jervis B. Webb Company of California
South Gate, California
August 2000
EKI 991103.01

Figure 3



LEGEND

Contour Representing the Elevation of the Groundwater Table in Feet Above Mean Sea Level (msl)

MW-3 (62.61) Groundwater Monitoring Well with Groundwater Elevation (msl)

Property Line/Site Boundary

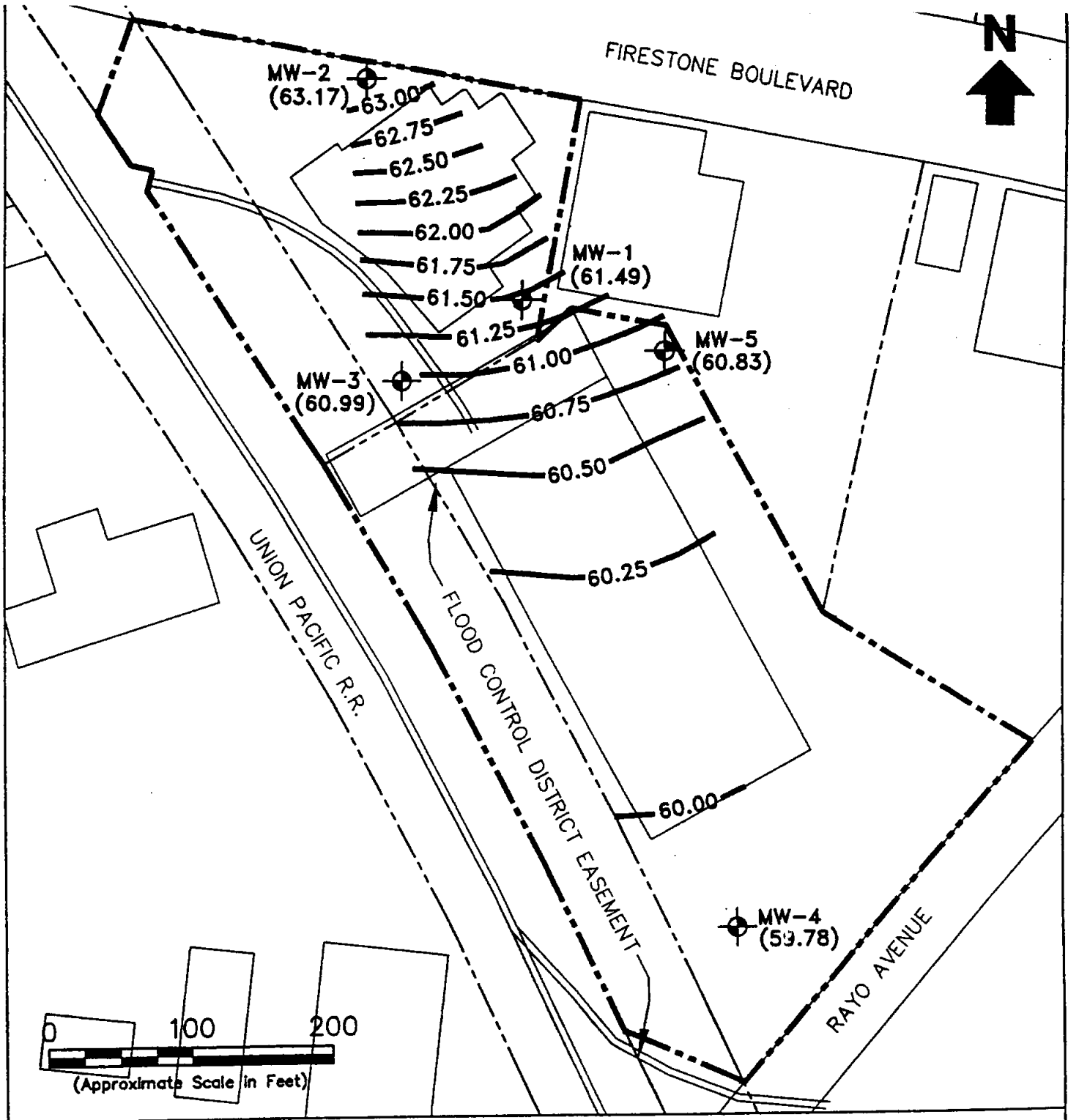
Notes:

1. All locations are approximate.

Erler & Kalinowski, Inc.

Elevation of the Groundwater Table on 18 May 2000

Jervis B. Webb Company of California
South Gate, California
August 2000
EKI 991103.01
Figure 4



LEGEND

- Contour Representing the Elevation of the Groundwater Table in Feet Above Mean Sea Level (msl)
- MW-3 (62.61) Groundwater Monitoring Well with Groundwater Elevation (msl)
- Property Line/Site Boundary

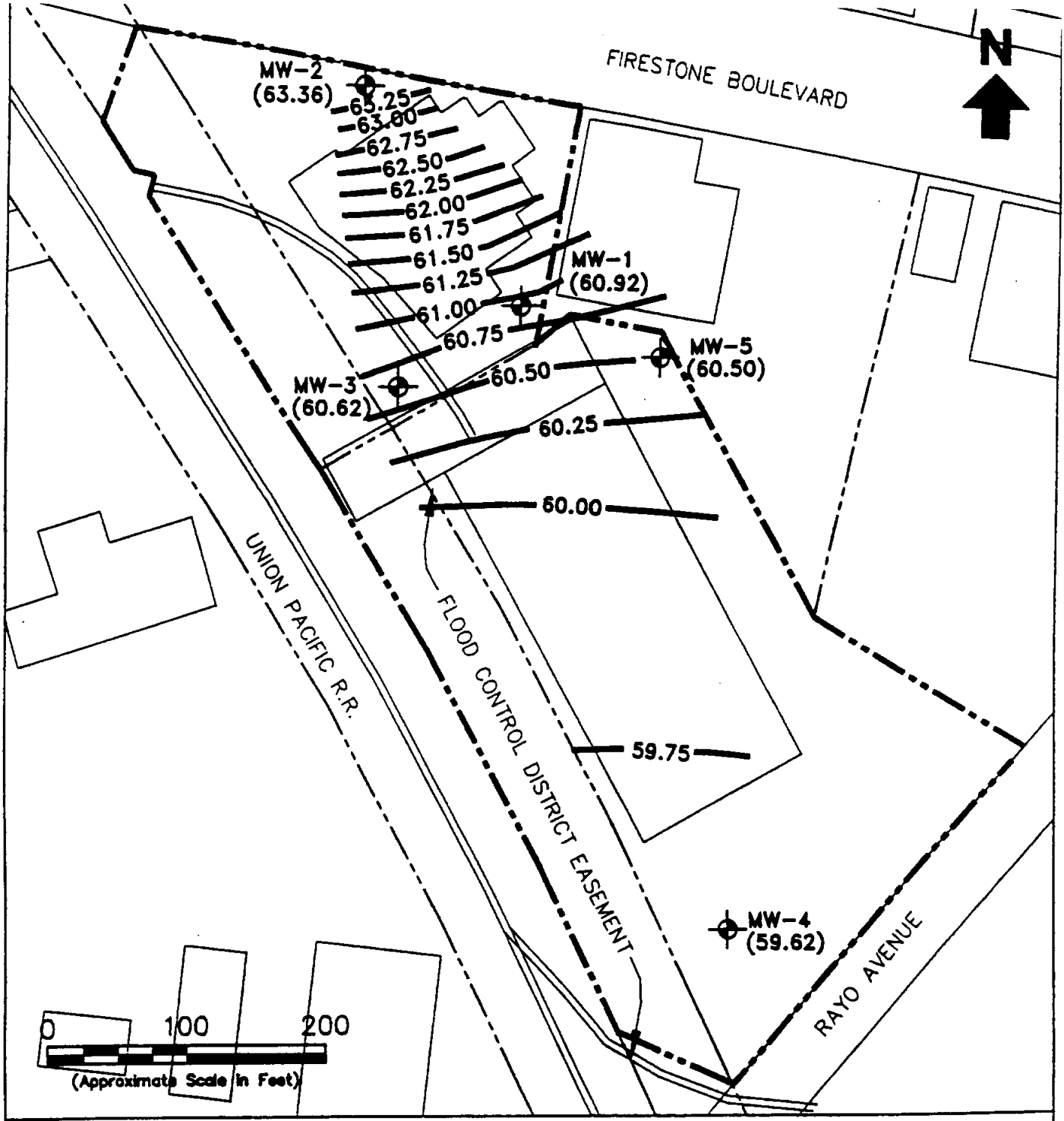
Notes:

1. All locations are approximate.

Erler & Kalinowski, Inc.

Elevation of the Groundwater Table on 20 June 2000

Jervis B. Webb Company of California
South Gate, California
August 2000
EKI 991103.01
Figure 5



LEGEND

Contour Representing the Elevation of the Groundwater Table in Feet Above Mean Sea Level (msl)

MW-3 (62.61) Groundwater Monitoring Well with Groundwater Elevation (msl)

Property Line/Site Boundary

Notes:

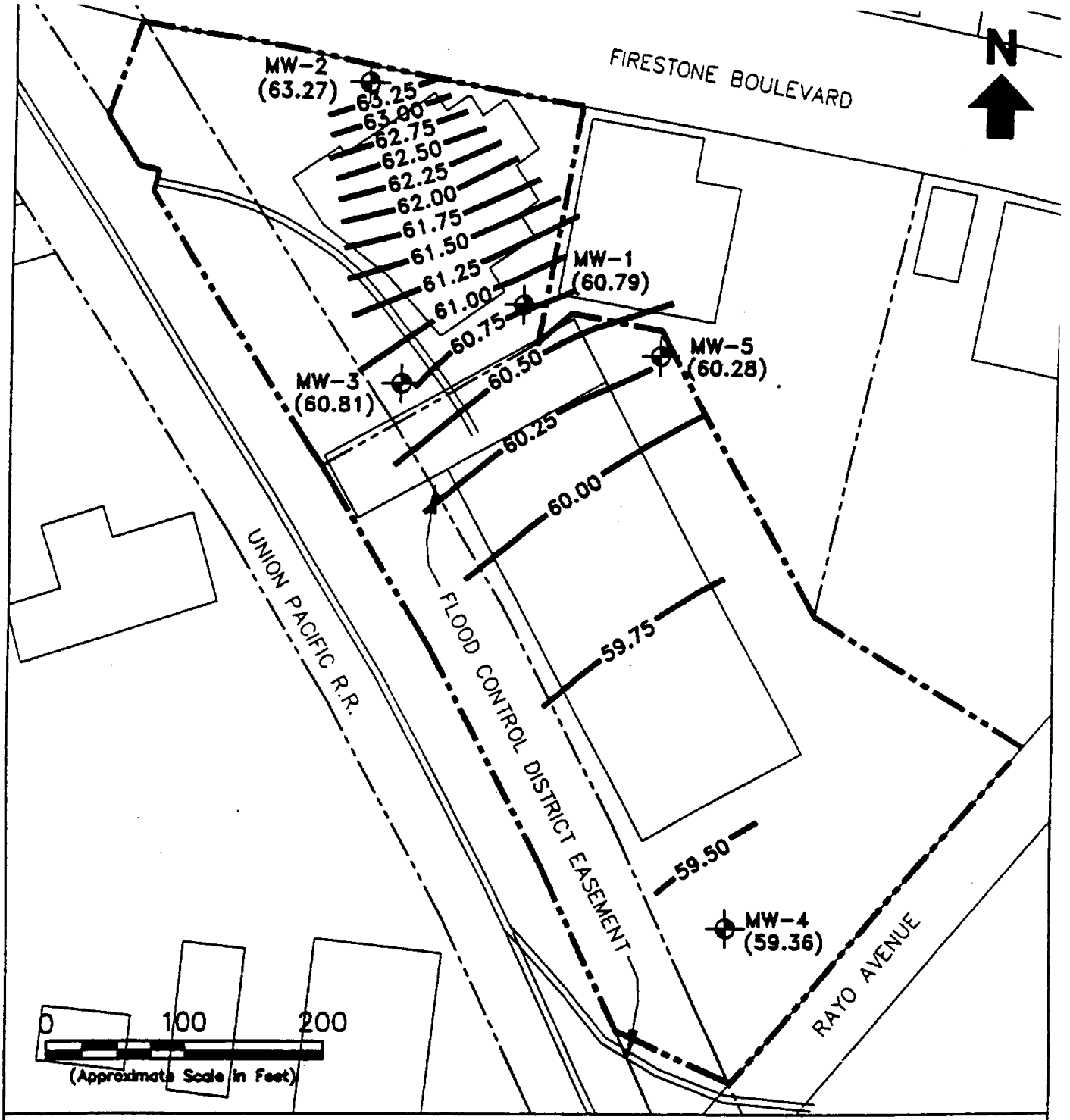
1. All locations are approximate.
2. NR = Not Recorded

Erler & Kalinowski, Inc.

Elevation of the Groundwater Table on 13 July 2000

Jervis B. Webb Company of California
South Gate, California
October 2000
EKI 991103.01

Figure 3



LEGEND

Contour Representing the Elevation of the Groundwater Table in Feet Above Mean Sea Level (msl)

MW-3 (62.61) Groundwater Monitoring Well with Groundwater Elevation (msl)

Property Line/Site Boundary

Notes:

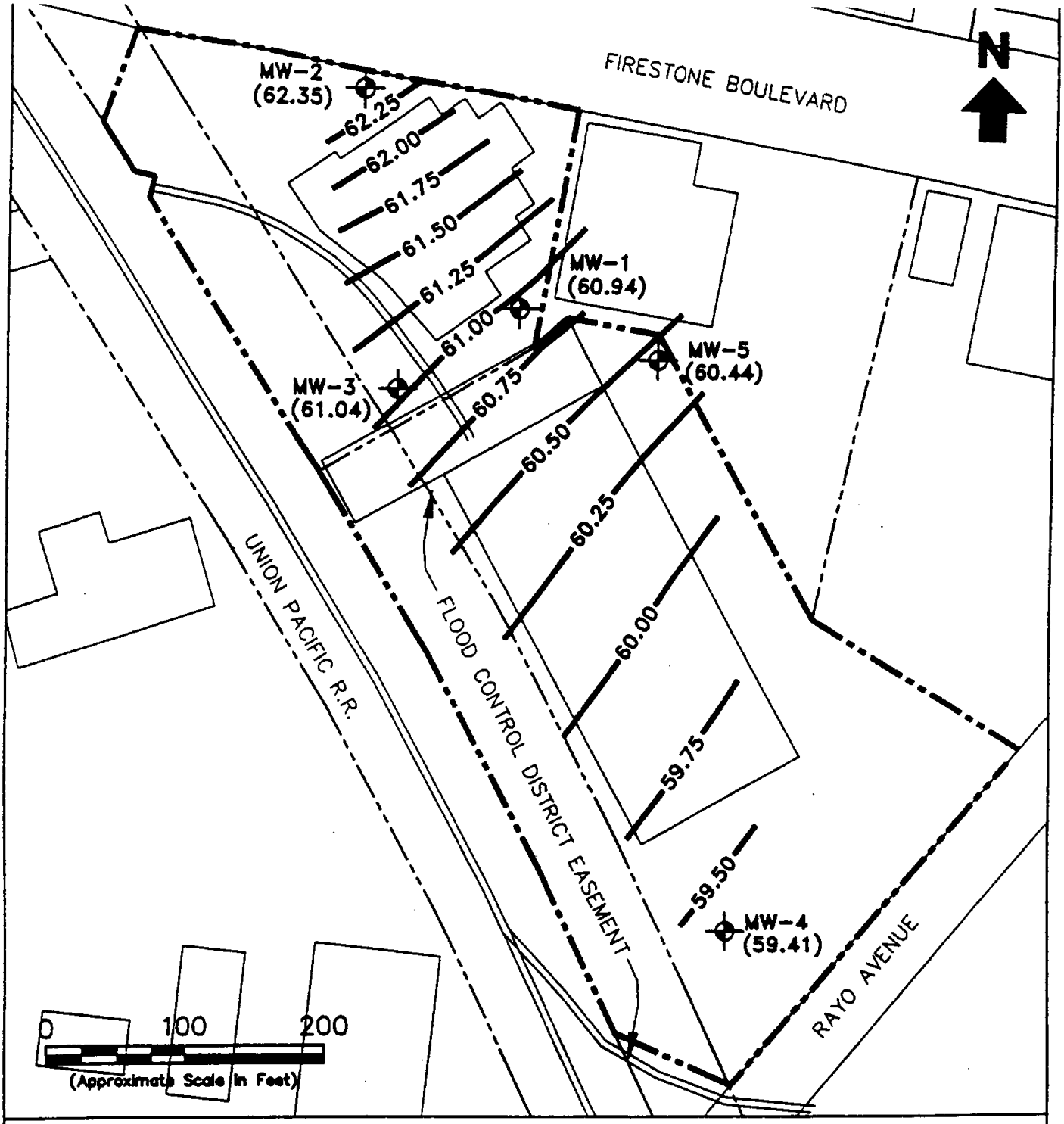
1. All locations are approximate.
2. NR = Not Recorded

Erler & Kalinowski, Inc.

Elevation of the Groundwater Table on 17 August 2000

Jervis B. Webb Company of California
South Gate, California
October 2000
EKI 991103.01

Figure 4



LEGEND

Contour Representing the Elevation of the Groundwater Table in Feet Above Mean Sea Level (msl)

MW-3 (62.61) Groundwater Monitoring Well with Groundwater Elevation (msl)

Property Line/Site Boundary

Notes:

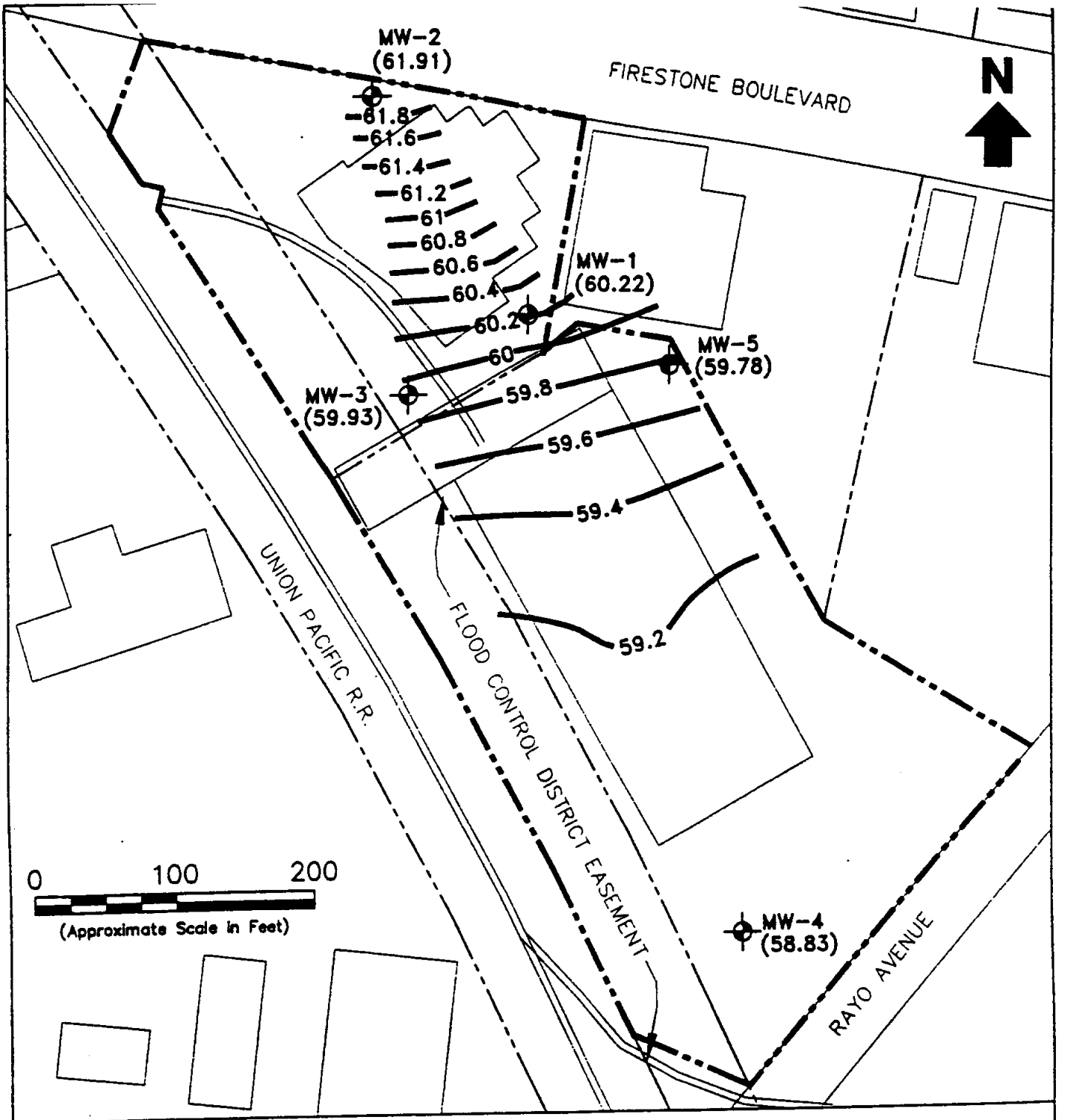
1. All locations are approximate.
2. NR = Not Recorded

Erler & Kalinowski, Inc.

Elevation of the Groundwater Table on 7 September 2000

Jervis B. Webb Company of California
South Gate, California
October 2000
EKI 991103.01

Figure 5



LEGEND

62.00 — Contour Representing the Elevation of the Groundwater Table in Feet Above Mean Sea Level (msl)

MW-3 (59.93) Groundwater Monitoring Well with Groundwater Elevation (msl)

Property Line/Site Boundary

Notes:

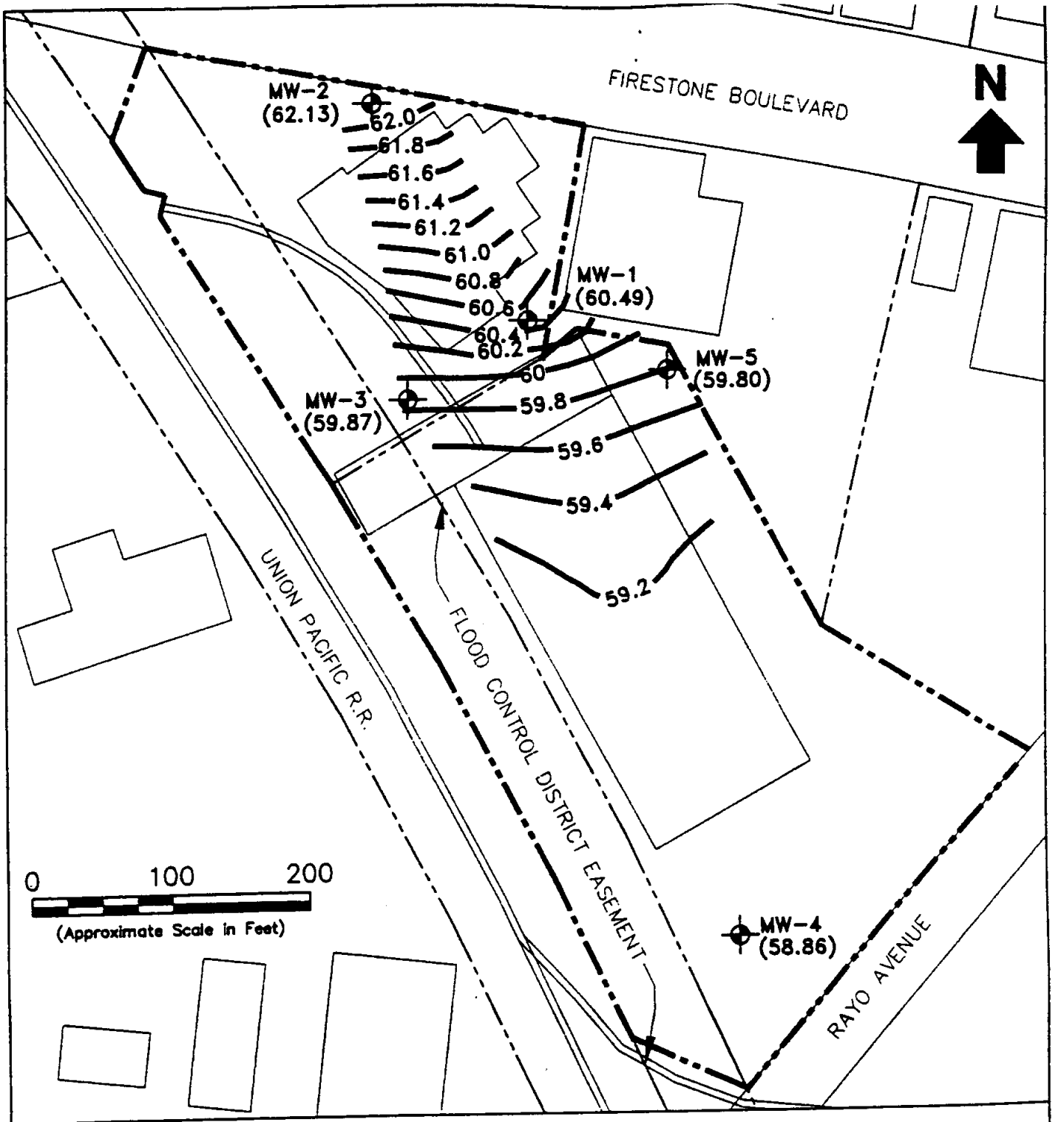
1. All locations are approximate.
2. NR = Not Recorded

Erler & Kalinowski, Inc.

Elevation of the Groundwater Table on 26 October 2000

Jervis B. Webb Company of California
South Gate, California
February 2001
EKI 991103.01

Figure 3



LEGEND

62.0 — Contour Representing the Elevation of the Groundwater Table in Feet Above Mean Sea Level (msl)

MW-3 (59.87) Groundwater Monitoring Well with Groundwater Elevation (msl)

Property Line/Site Boundary

Notes:

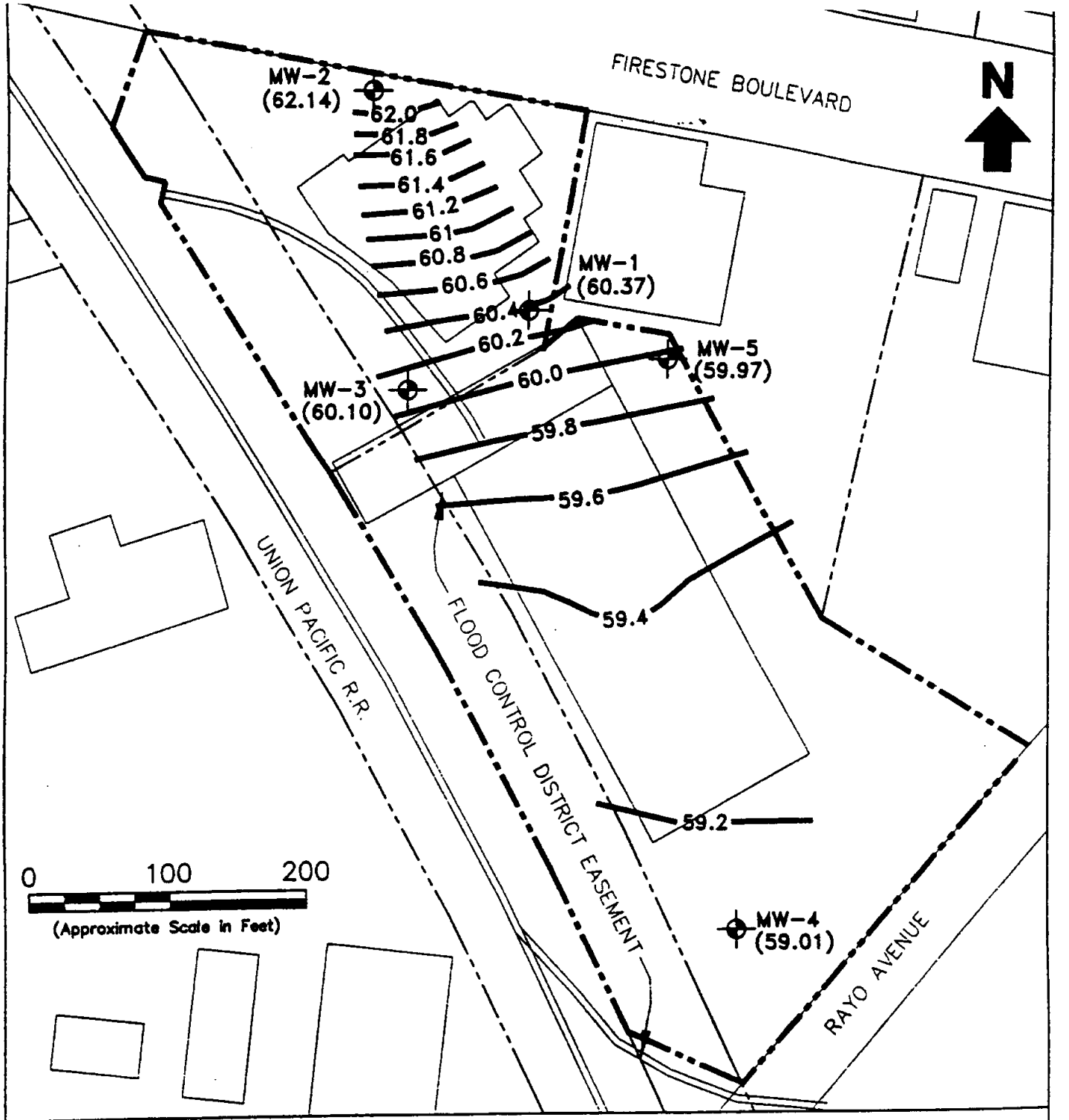
1. All locations are approximate.
2. NR = Not Recorded

Erler & Kalinowski, Inc.

Elevation of the Groundwater Table on 21 November 2000

Jervis B. Webb Company of California
South Gate, California
February 2001
EKI 991103.01

Figure 4



LEGEND

62.0 — Contour Representing the Elevation of the Groundwater Table in Feet Above Mean Sea Level (msl)

MW-3 (60.10) Groundwater Monitoring Well with Groundwater Elevation (msl)

Property Line/Site Boundary

Notes:

1. All locations are approximate.
2. NR = Not Recorded

Erler & Kalinowski, Inc.

Elevation of the Groundwater Table on 5 December 2000

Jervis B. Webb Company of California
South Gate, California
February 2001
EKI 991103.01

Figure 5

APPENDIX C

APPENDIX C

Soil Vapor Extraction Data
(EKI Report April 30, 2001)

Quarterly Progress Report
January through March 2001

Jervis B. Webb Company of California
5030 Firestone Boulevard
South Gate, California

30 April 2001

Erler & Kalinowski, Inc.
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Quarterly Progress Report: January through March 2001
Jervis B. Webb Company of California
5030 Firestone Boulevard, South Gate, California

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Jervis B. Webb Company of California
5030 Firestone Boulevard, South Gate, California

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5030 Firestone Boulevard, South Gate, California

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1. INTRODUCTION

Erler & Kalinowski, Inc. ("EKI") is pleased to present this *Quarterly Progress Report, January through March 2001* for the property located at 5030 Firestone Boulevard and 9301 Rayo Avenue in South Gate, California (collectively referred to as the "Site," see Figure 1). The work documented in this report was performed on behalf of the Jervis B. Webb Company of California ("Webb"). The property at 5030 Firestone Boulevard is owned by Webb and the adjacent property at 9301 Rayo Avenue is owned by Reliable Steel Building Products, Inc. ("Reliable Steel").

The principal objectives of the activities performed during this quarter were to (1) monitor the groundwater wells at the Site, and (2) continue operation of the soil vapor extraction ("SVE") system at the Site. The quarterly groundwater monitoring activities described herein were performed in accordance with the procedures described in *Project Tasks, Schedule, and Work Plan for Additional Groundwater Investigation and Quarterly Groundwater Monitoring at the Jervis B. Webb Company Property* by EKI, dated 29 September 1998. The SVE activities described herein were performed in accordance with the *Work Plan for Clarifier Removal and Soil Remediation by Soil Vapor Extraction* by EKI, dated 14 April 1999 ("SVE Work Plan"). The California Regional Water Quality Control Board, Los Angeles Region ("RWQCB") approved the SVE Work Plan, with two modifications, in its letter to Webb dated 18 May 1999.

3. SOIL REMEDIATION

3.1. Description of the Soil Vapor Extraction System

3.1.1. Soil Vapor Wells

Four soil vapor extraction wells and four soil vapor monitoring probes were installed at the Site during June 1999 (see Figure 7). The wells and probes were designed to allow for vapor extraction and monitoring in both the shallow and deep vadose zones at the Site. All of the wells were constructed using Schedule 40 PVC casing and screen. More detailed descriptions of well construction and subsurface conditions at the Site are contained in reports previously provided to the RWQCB (see EKI, 14 April 1999; EKI, 13 October 1999).

On 29 June 2000, two of the soil vapor monitoring probes (VMP-D1 and VMP-D2) were converted to extraction wells by connecting the probes to the soil vapor extraction system at the Site with two-inch diameter PVC pipe. These wells have been used as extraction wells during system operation since 6 July 2000. On 8 March 2001, vapor monitoring probe VMP-1 was converted to an extraction well by connecting the probe to the soil vapor extraction system at the Site with a two-inch diameter hose. This well has been used as an extraction well during system operation since 8 March 2001.

Soil Vapor Extraction Wells: The four shallow vadose zone SVE wells (see locations SVE-1, SVE-2, SVE-3, and VMP-1 on Figure 7) are constructed with two-inch diameter PVC casing. Wells SVE-1, SVE-3, and VMP-1 have slotted screen from approximately 19 to 25 ft bgs, and have total depths of approximately 25 ft bgs. Well SVE-2 has slotted screen from approximately 18 to 24 ft bgs, and has a total depth of approximately 24 ft bgs.

The three deep vadose zone SVE wells are wells SVE-D1, VMP-D1, and VMP-D2. Well SVE-D1 is constructed with four-inch diameter PVC casing with slotted screen from approximately 30 to 40 ft bgs, and has a total depth of approximately 44 ft bgs. Deep vadose zone SVE wells VMP-D1 and VMP-D2 are constructed in the same boreholes with shallow vadose zone SVE wells SVE-2 and SVE-3, respectively, and are constructed with 2-inch diameter PVC casing. Well VMP-D1 has slotted screen from approximately 30 to 40 ft bgs, and has a total depth of approximately 43 ft bgs. Well VMP-D2 has slotted screen from approximately 31 to 41 ft bgs, and has a total depth of approximately 44 ft bgs.

Soil Vapor Monitoring Probes: The shallow vadose zone vapor monitoring probe (see location VMP-2 on Figure 7) is constructed with two-inch diameter PVC casing with slotted screen from approximately 19 to 25 ft bgs, and has a total depth of approximately 25 ft bgs.

3.1.2. Soil Vapor Extraction and Treatment System

Installation of the SVE system was completed at the Site during March 2000. Soil vapors from the extraction wells are passed through a condensate knock-out vessel and through a 200 cubic feet per minute ("cfm") blower (see Figure 8). The soil vapors are then passed through a heat exchanger and two 1,000-pound granular activated carbon ("GAC") vessels in series, with the treated vapors exhausted to the atmosphere under permit of the South Coast Air Quality Management District ("SCAQMD"). Valves on piping from each well and an ambient air inlet valve located ahead of the knockout vessel allow regulation of air extracted from the wells. PVC pipe and fittings are used throughout the system. Electrical power to the system is metered, and the system is enclosed in a fenced area.

Vacuum gauges, a hand-held flow meter, and sampling ports are used to monitor each of the vapor extraction wells. Vacuum is measured in inches of water column ("in-wc"), vapor flow rate is measured in actual cubic feet per minute ("acfm"), and concentrations of VOCs are measured in parts per million by volume ("ppmv"). Sampling ports were installed at each of the vapor wells and probes and several locations in the SVE system for monitoring of VOC concentrations.

3.2. Operation and Monitoring of the SVE System

3.2.1. System Operation

The SVE system began operating on 16 March 2000. Throughout this reporting period (i.e., January through March 2001), wells SVE-1, SVE-2, SVE-3, SVE-D1, VMP-D1, and VMP-D2 were used as vapor extraction wells. Well VMP-1 has been used as an extraction well since 8 March 2001. Operation and maintenance of the SVE system is performed by Drewelow.

The SVE system was shut down on 4 January 2001 following a static vapor sampling event (see EKI, 5 February 2001). The system was restarted on 19 February 2001 and was in operation through the remainder of the reporting period.

3.2.2. System Monitoring

The following parameters have been monitored during operation of the SVE system: vapor flow rate from the extraction wells; total vapor flow rate; vacuum (pressure) at the extraction wells and monitoring points; blower influent flow rate and vacuum; blower discharge flow rate, pressure, and temperature; and VOC concentrations in the extracted soil vapor. The water level in the knockout tank is also monitored. No water had been observed in the knockout tank prior to a system shutdown on 21 June 2000. However, during this reporting period, water was observed in the piping of extraction well SVE-2 and the inlet manifold to the system blower. Approximately 200 gallons of water were removed from the SVE system

during this reporting period. The water is stored in 55-gallon drums and transported offsite for disposal and/or treatment.

Monitoring data collected at the inlet to the system blower prior to dilution with ambient air are presented in Table 4a and Figure 9a. Monitoring data collected at individual soil vapor extraction wells are presented in Tables 4b through 4h and Figures 9b through 9h. Field monitoring data for the soil vapor monitoring probes are presented in Table 5.

On 29 March 2001, flow rates in the four shallow zone extraction wells (SVE-1, SVE-2, SVE-3, and VMP-1) ranged from 2.3 to 2.7 acfm. The flow rates in the three deep zone extraction wells (SVE-D1, VMP-D1, and VMP-D2) ranged from 19 to 21 acfm at the end of the reporting period.

3.2.3. Soil Vapor Field Monitoring

Total VOC concentrations in soil vapor samples were also periodically monitored with an organic vapor meter, which utilizes a photoionization detector ("PID") to measure total concentrations of VOCs. The PID does not distinguish between individual compounds, but measures the total concentration of VOCs in samples of vapor. Samples of soil vapor were collected in Tedlar bags for the PID analyses. The PID was calibrated with 100 ppmv of isobutylene. PID readings from soil vapor samples collected at the system blower, the extraction wells, and the vapor monitoring probes are presented in Tables 4a through 4h and in Table 5. These data are plotted as a function of time on Figures 9a through 9h. The PID readings suggest that total VOC concentrations in the blower influent and each of the vapor wells decreased during this reporting period.

3.2.4. Estimated Removal of VOCs

As no samples of soil vapor were collected for laboratory analysis during this reporting period, no estimates of VOC mass removal by the SVE system have been attempted for this reporting period. Based on measurements made at the blower influent and laboratory analytical data, it was estimated that a total of 133 pounds of VOCs, including 108 pounds of TCE, had been extracted from soil at the Site as of 14 December 2000 (see Table 4a and EKI, 5 February 2001). Given that the PID readings for vapor samples collected from the SVE system during this reporting period were generally lower than previous measurements, it appears likely that less than 10 pounds of VOCs were extracted from soil at the Site during this reporting period (see Table 4a).

3.2.5. SCAQMD Compliance Monitoring

During this reporting period, the effluent of the treatment system was monitored with a PID on a weekly basis to demonstrate conformance with the limitations of the SCAQMD permit for the system. For treatment system monitoring, the PID was calibrated with 50 ppmv of hexane.

The vapor treatment components of the SVE system at the Site are owned by Drewelow, and the SCAQMD permit is held by Drewelow. Drewelow reports that effluent concentrations measured by the PID have been within the discharge limitations of the SCAQMD permit throughout the operation of the SVE system.

4. PLANNED ACTIVITIES FOR NEXT QUARTER

During the next quarter, the depth to groundwater in the monitoring wells at the Site will continue to be measured on a monthly basis. Samples of groundwater will be collected from each of the groundwater monitoring wells at the Site during June 2001. These samples will be analyzed for VOCs using EPA Method 8260B and for CCR Metals using EPA Methods 206.2, 200.7, 218.4, and 245.1.

Webb will continue to operate the SVE system at the Site during the next quarter. Flow rates, vacuum, and PID readings will be monitored at the extraction wells on a weekly basis during operation of the SVE system.

5. SUMMARY

Gauging of the depth to the groundwater table was performed at the groundwater monitoring wells at the Site on 4 January, 22 February, and 8 March 2001. On the basis of these measurements, the predominant direction of groundwater flow appears to be toward the south-southeast under both the Webb and Reliable Steel properties. This estimated direction of groundwater flow is consistent with previous groundwater monitoring at the Site.

The only VOCs detected in the samples of groundwater collected at the Site on 8 March 2001 were TCE, c-1,2-DCE, 1,1-DCE, and toluene. Consistent with previous results, TCE was the chemical of concern detected with the greatest frequency (five of six samples) and at the highest concentration (23,000 ug/L in well MW-1). The concentrations of TCE, c-1,2-DCE, and 1,1-DCE detected in samples of the groundwater collected at the Site during March 2000 were within the ranges of concentrations detected during previous monitoring at the Site. The only detection of toluene (140 ug/L) was in the sample of groundwater collected from well MW-5. No VOCs were detected in the sample of groundwater collected from downgradient monitoring well MW-4.

As requested by the RWQCB in its meeting with Webb on 8 February 2001, the samples of groundwater collected at the Site during March 2001 were analyzed for CCR metals. Arsenic (5.6 to 320 ug/L), barium(19 to 150 ug/L), molybdenum (<50 to 1,100 ug/L), and zinc (12 to 25 ug/L) were the only metals detected in the samples of groundwater collected at the Site on 8 March 2001 (see Table 3). No other metals, including chromium, were detected in the samples of groundwater collected from the monitoring wells at the Site.

The SVE system at the Site has operated continuously since the restart of the system on 19 February 2001. PID readings from soil vapor samples collected at the extraction wells and vapor monitoring probes suggest that total VOC concentrations in the blower influent and each of the vapor wells decreased during this reporting period.

TABLE 4a

Soil Vapor Extraction Data: Blower Influent

Quarterly Progress Report for January through March 2001

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California

Date	Time	Elapsed Time on Hour Meter (hrs)	Operation Time	Flow (acfm)	Flow (scfm)	Vacuum (in-wc)	Total VOCs by PID (ppmv)	TCE Conc. by Lab (ppmv)	Estimated VOC Removal TCE (lb/day)	Estimated VOC Removal Total VOCs (lb/day)	Cumulative Mass Removal TCE (lbs)	Cumulative Mass Removal Total VOCs (lbs)	Notes
System startup on 3/16/00 at 16:00.													
3/16/00	16:45	5.6	0%	4.5	4.1	35	2,000+	**860**	1.8	1.9	0	0	
3/17/00	7:00	20	100%	5.2	4.7	37	94	-					
3/18/00	6:30	45	100%	5.4	4.9	38	128	-					
System shut down on 3/18/00 at 9:40. System restarted on 3/19/00 at 6:30.													
3/19/00	6:30	48	13%	6.1	5.53	38	103	-					
3/20/00	6:30	72	100%	8.6	7.7	43	145	-					
3/21/00	7:00	96	100%	4.8	4.1	60	745	-					
3/22/00	7:30	121	100%	11	10	15	173	**490**	2.5	2.6	10	11	4A
3/30/00	11:00	316	100%	20	18	45	39	-					
4/6/00	11:00	483	100%	25	17	125	42	-					
4/13/00	8:00	648	100%	21	13	150	42	**70**	0.45	0.51	43	45	4A
4/20/00	7:30	815	100%	21	13	145	43	-					
4/27/00	7:00	983	100%	16	10	150	30	-					
5/4/00	8:30	1,152	100%	16	10	150	20	-					
5/11/00	6:30	1,318	100%	14	9.0	150	20	-					
5/18/00	7:00	1,486	100%	19	12	150	38	**53**	0.32	0.34	56	60	4A
				28	18	150	38	-	0.47	0.50	-	-	
5/25/00	6:30	1,654	100%	18	12	150	19	-					
6/1/00	6:30	1,822	100%	18	11	150	34	-					
6/8/00	7:00	1,990	100%	26	16	155	27	-					
6/15/00	7:30	2,158	100%	26	16	150	28	-					
System shut down on 6/21/00 at 17:30. System restarted on 7/6/00 at 10:00.													
7/6/00	10:23	2,312	30%	142	97	130	20	**37**	1.8	2.1	72	77	4B
7/13/00	12:00	2,485	102%	122	79	145	23	**18**	0.70	1.0	81	88	4A
7/20/00	7:30	2,648	100%	115	73	150	15	-					
System shut down on 7/26/00 at 6:30. System restarted on 7/27/00 at 6:00.													
7/27/00	6:00	2,791	86%	75	49	140	14	-					
8/3/00	8:00	2,961	100%	75	49	140	15	-					
8/8/00	14:30	3,086	100%	77	50	140	15	-					
System shut down on 8/15/00 at 11:30. System restarted on 8/21/00 at 10:30.													
8/24/00	12:30	3,326	63%	76	50	140	27	-					
System shut down on 8/30/00 at 13:30. System restarted on 8/31/00 at 9:00.													
8/31/00	9:00	3,471	88%	64	45	120	36	-					

TABLE 4a

Soil Vapor Extraction Data: Blower Influent

Quarterly Progress Report for January through March 2001

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California

Date	Time	Elapsed Time on Hour Meter (hrs)	Operation Time	Flow (acfm)	Flow (scfm)	Vacuum (in-wc)	Total VOCs by PID (ppmv)	TCE Conc. by Lab (ppmv)	Estimated VOC Removal TCE (lb/day)	Estimated VOC Removal Total VOCs (lb/day)	Cumulative Mass Removal TCE (lbs)	Cumulative Mass Removal Total VOCs (lbs)	Notes
System shut down on 9/6/00 at 15:00. System restarted on 9/7/00.													
9/7/00	10:30	3,621	88%	66	46	125	9.7	-					
9/14/00	9:00	3,788	100%	66	43	140	13	**5.6**	0.12	0.29	104	124	4A
System shut down on 9/14/00 for rebound test.													
9/28/00	11:24	3,788	0%	-	-	120	42	**54**	-	-	-	-	
System shut down on 9/28/00 at 12:00. System restarted on 10/1/00 at 6:30.													
10/1/00	6:30	3,791	4%	-	-	-	-	-					
System shut down on 10/1/00 at 10:30. System restarted on 10/5/00 at 7:30.													
10/5/00	7:30	3,795	4%	73	52	120	296	-					
10/12/00	8:00	3,964	100%	74	52	120	39	-					
10/19/00	8:00	4,132	100%	72	51	120	39	-					
10/26/00	8:00	4,301	100%	75	54	115	18	**2.3**	0.061	0.15	106	128	4A
System shut down on 10/31/00 at 9:20. System restarted on 11/2/00 at 8:00.													
11/2/00	8:00	4,422	72%	-	-	140	17	-					
System shut down on 11/2/00 at 19:00. System restarted on 11/9/00 at 7:30.													
11/9/00	7:30	4,433	7%	-	-	140	397	-					
System shut down on 11/9/00 at 15:30. System restarted on 11/16/00 at 10:00.													
11/16/00	10:00	4,441	5%	-	-	140	144	-					
System shut down on 11/17/00 at 12:00. System restarted on 11/23/00 at 7:30.													
11/23/00	7:30	4,443	1%	-	-	140	152	-					
11/30/00	7:30	4,611	100%	-	-	140	121	-					
System shut down on 12/6/00 at 21:00. System restarted on 12/7/00 at 8:00.													
12/7/00	8:00	4,768	93%	-	-	140	107	-					
12/14/00	10:30	4,940	100%	57	38	140	6.2	**6.7**	0.13	0.23	108	133	4A
System shut down on 12/14/00 for rebound test.													
1/4/01	11:37	4,940	0%	170	111	140	44	**30**	-	-	-	-	

TABLE 4a

Soil Vapor Extraction Data: Blower Influent

Quarterly Progress Report for January through March 2001

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California

Date	Time	Elapsed Time on Hour Meter (hrs)	Operation Time	Flow (acfm)	Flow (scfm)	Vacuum (in-wc)	Total VOCs by PID (ppmv)	TCE Conc. by Lab (ppmv)	Estimated VOC Removal TCE (lb/day)	Estimated VOC Removal Total VOCs (lb/day)	Cumulative Mass Removal TCE (lbs)	Cumulative Mass Removal Total VOCs (lbs)	Notes
System shut down on 1/4/01. System restarted on 2/19/01 at 15:45.													
2/19/01	15:45	4,940	0%	-	-	140	42	-					
2/22/01	17:00	5,016	100%	-	-	140	37	-					
3/1/01	12:45	5,180	100%	-	-	140	29	-					
3/8/01	7:30	5,343	100%	-	-	145	48	-					
3/15/01	13:00	5,516	100%	-	-	145	8.5	-					
3/22/01	13:00	5,682	100%	-	-	145	7.8	-					
3/29/01	14:30	5,854	100%	-	-	140	8.5	-	-	-	-	-	-

NOTES:

TCE = trichloroethene
acfm = actual cubic feet per minute
°F = degrees Fahrenheit
hrs = hours
in-wc = inches of water column
lb/day = pounds per day
lbs = pounds
PID = photoionization detector
ppmv = parts per million by volume
scfm = standard cubic feet per minute
tr = trace (concentration detected at less than reporting limit)
VOCs = volatile organic compounds
- = no measurement
< = not detected at indicated method detection limit

1. PID calibrated with 100 ppmv of isobutylene.
2. Laboratory analyses were performed by Performance Analytical, Inc. in Simi Valley, California using EPA Method TO-14A.
3. Removal rates are calculated using analyte concentrations from laboratory analyses and the measured flow rate (converted from acfm to scfm using the measured vacuum).
4. Cumulative mass removal amounts are calculated as follows (see Notes column in table):
   A: Mass removal calculated using an average of the previous and current mass removal rates.
   B: Mass removal calculated using the previous mass removal rate.
5. On days for which two flow and vacuum readings are provided, the values indicate initial and final readings during the site visit.
6. Although not shown on this table, mass removal rates were calculated for each VOC detected in the samples of undiluted blower influent. The total VOC mass removal rate presented in this table is the sum of the undiluted mass removal rates calculated for each VOC that was detected.

TABLE 4b

Soil Vapor Extraction Data: Extraction Well SVE-1

Quarterly Progress Report for January through March 2001

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California

Date	Time	Elapsed Time on Hour Meter (hrs)	Flow (acfm)	Flow (scfm)	Vacuum (in-wc)	Total VOCs by PID (ppmv)	TCE Conc. by Lab (ppmv)	Estimated VOC Removal Rates: TCE (lb/day)	Estimated VOC Removal Rates: Total VOCs (lb/day)	Cumulative Mass Removal: TCE (lbs)	Cumulative Mass Removal: Total VOCs (lbs)	Notes
Static vapor sample collected on 3/16/00.												
3/16/00	9:25	5.6	0.04	0.04	35	865	**10,000**	0.18	0.19	0	0	
System startup on 3/16/00 at 16:00.												
3/17/00	7:00	20	0.04	0.04	37	191	-					
3/18/00	6:30	45	0.06	0.05	38	195	-					
System shut down on 3/18/00 at 9:40. System restarted on 3/19/00 at 6:30.												
3/19/00	6:30	48	0.70	0.63	38	2,000+	-					
3/20/00	6:30	72	0.63	0.56	43	2,000+	-					
3/21/00	7:00	96	0.61	0.52	60	2,000+	-					
3/22/00	7:30	121	0.58	0.56	15	2,000+	**10,000**	2.8	2.9	7.1	7.3	4A
3/30/00	11:00	316	0.87	0.79	38	1,799	-					
4/6/00	11:00	483	0.45	0.31	125	719	-					
4/13/00	8:00	648	0.85	0.54	150	716	**6,500**	1.7	1.8	57	58	4A
4/20/00	7:30	815	0.70	0.45	145	868	-					
4/27/00	7:00	983	0.87	0.55	150	915	-					
5/4/00	8:30	1,152	0.89	0.56	150	1,427	-					
5/11/00	6:30	1,318	0.92	0.58	150	2,000+	-					
5/18/00	7:00	1,486	1.1	0.68	150	276	**3,700**	1.2	1.3	109	112	4A
			1.1	0.69	150	276	-	1.3	1.3	-	-	
5/25/00	6:30	1,654	1.3	0.84	150	146	-					
6/1/00	6:30	1,822	0.65	0.41	150	128	-					
6/8/00	7:00	1,990	0.67	0.41	155	112	-					
6/15/00	7:30	2,158	0.65	0.41	150	105	-					
System shut down on 6/21/00 at 17:30. Static vapor sample collected on 7/6/00.												
7/6/00	9:49	2,312	1.3	0.89	130	1,582	**3,300**	-	-	-	-	
System restarted on 7/6/00 at 10:00.												
7/13/00	12:00	2,485	1.3	0.84	145	2,000+	**2,200**	0.92	0.95	154	159	4A
7/20/00	7:30	2,648	1.3	0.83	150	154	-					
System shut down on 7/26/00 at 6:30. System restarted on 7/27/00 at 6:00.												
7/27/00	6:00	2,791	2.0	1.3	140	77	-					
8/3/00	8:00	2,961	2.1	1.4	140	89	-					
8/8/00	14:30	3,086	2.1	1.4	140	92	-					
System shut down on 8/15/00 at 11:30. System restarted on 8/21/00 at 10:30.												

TABLE 4b

Soil Vapor Extraction Data: Extraction Well SVE-1

Quarterly Progress Report for January through March 2001

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California

Date	Time	Elapsed Time on Hour Meter (hrs)	Flow		Vacuum (in-wc)	Total VOCs by PID (ppmv)	TCE Conc. by Lab (ppmv)	Estimated VOC Removal Rates		Cumulative Mass Removal		Notes
			(acfm)	(scfm)				TCE (lb/day)	Total VOCs (lb/day)	TCE (lbs)	Total VOCs (lbs)	
8/24/00	12:30	3,326	2.3	1.5	140	622	-					
System shut down on 8/30/00 at 13:30. System restarted on 8/31/00 at 9:00.												
8/31/00	9:00	3,471	0.96	0.68	120	1,820	-					
System shut down on 9/6/00 at 15:00. System restarted on 9/7/00.												
9/7/00	10:30	3,621	1.1	0.78	125	62	-					
9/14/00	9:00	3,788	1.6	1.0	140	76	**300**	0.15	0.16	183	189	4A
System shut down on 9/14/00 for rebound test. Static vapor sample collected on 9/28/00.												
9/28/00	11:07	3,788	1.6	1.1	120	2,000+	**230**	-	-	-	-	
System shut down on 9/28/00 at 12:00. System restarted on 10/1/00 at 6:30.												
10/1/00	6:30	3,791	-	-	-	-	-					
System shut down on 10/1/00 at 10:30. System restarted on 10/5/00 at 7:30.												
10/5/00	7:30	3,795	2.3	1.6	120	2,000+	-					
10/12/00	8:00	3,964	2.4	1.7	120	1,687	-					
10/19/00	8:00	4,132	2.4	1.7	120	651	-					
10/26/00	8:00	4,301	2.4	1.7	115	385	**140**	0.12	0.12	186	192	4A
System shut down on 10/31/00 at 9:20. System restarted on 11/2/00 at 8:00.												
11/2/00	8:00	4,422	3.6	2.4	140	289	-					
System shut down on 11/2/00 at 19:00. System restarted on 11/9/00 at 7:30.												
11/9/00	7:30	4,433	2.5	1.6	140	2,000+	-					
System shut down on 11/9/00 at 15:30. System restarted on 11/16/00 at 10:00.												
11/16/00	10:00	4,441	2.7	1.7	140	2,000+	-					
System shut down on 11/17/00 at 12:00. System restarted on 11/23/00 at 7:30.												
11/23/00	7:30	4,443	2.5	1.7	140	2,000+	-					
11/30/00	7:30	4,611	12.4	8.1	140	748	-					
System shut down on 12/6/00 at 21:00. System restarted on 12/7/00 at 8:00.												
12/7/00	8:00	4,768	8.3	5.4	140	111	-					
12/14/00	10:30	4,940	2.4	1.6	140	43	**260**	0.21	0.22	191	197	4A
System shut down on 12/14/00 for rebound test.												
1/4/01	11:02	4,940	2.3	1.6	120	515	**350**	-	-	-	-	

TABLE 4b

Soil Vapor Extraction Data: Extraction Well SVE-1

Quarterly Progress Report for January through March 2001

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California

Date	Time	Elapsed Time on Hour Meter (hrs)	Flow (acfm)	Flow (scfm)	Vacuum (in-wc)	Total VOCs by PID (ppmv)	TCE Conc. by Lab (ppmv)	Estimated VOC Removal Rates: TCE (lb/day)	Estimated VOC Removal Rates: Total VOCs (lb/day)	Cumulative Mass Removal: TCE (lbs)	Cumulative Mass Removal: Total VOCs (lbs)	Notes
System shut down on 1/4/01. System restarted on 2/19/01 at 15:45.												
2/19/01	15:45	4,940	2.5	1.6	140	875	-					
2/22/01	17:00	5,016	2.6	1.7	140	801	-					
3/1/01	12:45	5,180	2.5	1.7	140	1,505	-					
3/8/01	7:30	5,343	2.5	1.6	145	79	-					
3/15/01	13:00	5,516	2.5	1.6	145	37	-					
3/22/01	13:00	5,682	2.6	1.6	145	53	-					
3/29/01	14:30	5,854	2.3	1.6	130	38	-	-	-	-	-	

NOTES:

TCE = trichloroethene
acfm = actual cubic feet per minute
°F = degrees Fahrenheit
hrs = hours
in-wc = inches of water column
lb/day = pounds per day
lbs = pounds
PID = photoionization detector
ppmv = parts per million by volume
scfm = standard cubic feet per minute
tr = trace (concentration detected at less than reporting limit)
VOCs = volatile organic compounds
- = no measurement
< = not detected at indicated method detection limit

1. PID calibrated with 100 ppmv of isobutylene.
2. Laboratory analyses were performed by Performance Analytical, Inc. in Simi Valley, California using EPA Method TO-14A.
3. Removal rates are calculated using analyte concentrations from laboratory analyses and the measured flow rate (converted from acfm to scfm using the measured vacuum).
4. Cumulative mass removal amounts are calculated as follows:
   A: Mass removal calculated using an average of the previous and current mass removal rates.
5. On days for which two flow and vacuum readings are provided, the values indicate initial and final readings during the site visit.
6. Although not shown on this table, mass removal rates were calculated for each VOC detected in the samples collected from well SVE-1. The total VOC mass removal rate presented in this table is the sum of the mass removal rates calculated for each VOC that was detected.
7. Extraction well SVE-1 is screened in the shallow vadose zone from 19 to 25 feet below ground surface.

TABLE 4c

Soil Vapor Extraction Data: Extraction Well SVE-2

Quarterly Progress Report for January through March 2001

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California

Date	Time	Elapsed Time on Hour Meter (hrs)	Flow (acfm)	Flow (scfm)	Vacuum (in-wc)	Total VOCs by PID (ppmv)	TCE Conc. by Lab (ppmv)	Estimated VOC Removal Rates: TCE (lb/day)	Estimated VOC Removal Rates: Total VOCs (lb/day)	Cumulative Mass Removal: TCE (lbs)	Cumulative Mass Removal: Total VOCs (lbs)	Notes
Static vapor sample collected on 3/16/00.												
3/16/00	10:10	5.6	0.61	0.56	35	227	**75**	0.021	0.021	0	0	
System Startup on 3/16/00 at 16:00.												
3/17/00	7:00	20.3	0.61	0.55	37	191	-					
3/18/00	6:30	44.7	0.61	0.55	38	33	-					
System shut down on 3/18/00 at 9:40. System restarted on 3/19/00 at 6:30.												
3/19/00	6:30	47.9	0.65	0.59	38	298	-					
3/20/00	6:30	72.2	0.94	0.84	43	235	-					
3/21/00	7:00	96.3	0.89	0.76	60	227	-					
3/22/00	7:30	120.5	0.57	0.55	15	93	-					
3/30/00	11:00	316	0.59	0.53	38	78	-					
4/6/00	11:00	483	0.74	0.51	125	38	-					
4/13/00	8:00	648	2.5	1.6	150	26	-					
4/20/00	7:30	815	1.1	0.71	145	5.4	-					
4/27/00	7:00	983	2.4	1.5	150	2.7	-					
5/4/00	8:30	1,152	2.3	1.5	150	5.8	-					
5/11/00	6:30	1,318	2.2	1.4	150	5.2	-					
5/18/00	7:00	1,486	2.2	1.4	150	13	-					
			2.0	1.3	150	13	-					
5/25/00	6:30	1,654	2.1	1.3	150	6.8	-					
6/1/00	6:30	1,822	2.1	1.3	150	28	-					
6/8/00	7:00	1,990	2.1	1.3	155	42	-					
6/15/00	7:30	2,158	2.1	1.3	150	38	-					
System shut down on 6/21/00 at 17:30. Static vapor sample collected on 7/6/00.												
7/6/00	9:25	2,312	1.2	0.83	130	37	**120**	0.050	0.054	3.4	3.6	4A
System restarted on 7/6/00 at 10:00.												
7/13/00	12:00	2,485	1.3	0.80	145	6.8	-					
7/20/00	7:30	2,648	1.3	0.80	150	27	-					
System shut down on 7/26/00 at 6:30. System restarted on 7/27/00 at 6:00.												
7/27/00	6:00	2,791	1.6	1.1	140	18	-					
8/3/00	7:30	2,961	1.6	1.0	140	17	-					
8/8/00	14:30	3,086	1.6	1.0	140	14	-					
System shut down on 8/15/00 at 11:30. System restarted on 8/21/00 at 10:30.												
8/24/00	12:30	3,326	1.9	1.2	140	1.7	-					

TABLE 4c

Soil Vapor Extraction Data: Extraction Well SVE-2

Quarterly Progress Report for January through March 2001

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California

Date	Time	Elapsed Time on Hour Meter (hrs)	Flow (acfm)	Flow (scfm)	Vacuum (in-wc)	Total VOCs by PID (ppmv)	TCE Conc. by Lab (ppmv)	Estimated VOC Removal Rates: TCE (lb/day)	Estimated VOC Removal Rates: Total VOCs (lb/day)	Cumulative Mass Removal: TCE (lbs)	Cumulative Mass Removal: Total VOCs (lbs)	Notes
System shut down on 8/30/00 at 13:30. System restarted on 8/31/00 at 9:00.												
8/31/00	9:00	3,471	1.5	1.1	120	22	-					
System shut down on 9/6/00 at 15:00. System restarted on 9/7/00.												
9/7/00	10:30	3,621	1.6	1.1	125	16	-					
9/14/00	9:00	3,788	1.6	1.1	140	20	**77**	0.041	0.042	6.2	6.5	4A
System shut down on 9/14/00 for rebound test. Static vapor sample collected on 9/28/00.												
9/28/00	10:50	3,788	1.4	1.0	120	61	**110**	-	-	-	-	
System shut down on 9/28/00 at 12:00. System restarted on 10/1/00 at 6:30.												
10/1/00	6:30	3,791	-	-	-	-	-					
System shut down on 10/1/00 at 10:30. System restarted on 10/5/00 at 7:30.												
10/5/00	7:30	3,795	1.9	1.4	120	9.7	-					
10/12/00	8:00	3,964	1.9	1.4	120	97	-					
10/19/00	8:00	4,132	1.9	1.3	120	33	-					
10/26/00	8:00	4,301	2.1	1.5	115	28	-					
System shut down on 10/31/00 at 9:20. System restarted on 11/2/00 at 8:00.												
11/2/00	8:00	4,422	-	-	140	6.0	-					
System shut down on 11/2/00 at 19:00. System restarted on 11/9/00 at 7:30.												
11/9/00	7:30	4,433	-	-	140	8.2	-					
System shut down on 11/9/00 at 15:30. System restarted on 11/16/00 at 10:00.												
11/16/00	10:00	4,441	-	-	140	810	-					
System shut down on 11/17/00 at 12:00. System restarted on 11/23/00 at 7:30.												
11/23/00	7:30	4,443	-	-	140	7.5	-					
11/30/00	7:30	4,611	-	-	140	5.3	-					
System shut down on 12/6/00 at 21:00. System restarted on 12/7/00 at 8:00.												
12/7/00	8:00	4,768	-	-	140	40	-					
12/14/00	10:30	4,940	2.9	1.9	140	9.7	**29**	0.027	0.029	7.8	8.2	4A
System shut down on 12/14/00 for rebound test.												
1/4/01	10:20	4,940	1.9	1.3	120	25	**34**	-	-	-	-	

TABLE 4c

Soil Vapor Extraction Data: Extraction Well SVE-2

Quarterly Progress Report for January through March 2001

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California

Date	Time	Elapsed Time on Hour Meter (hrs)	Flow		Vacuum (in-wc)	Total VOCs by PID (ppmv)	TCE Conc. by Lab (ppmv)	Estimated VOC Removal Rates		Cumulative Mass Removal		
			(acfm)	(scfm)				TCE (lb/day)	Total VOCs (lb/day)	TCE (lbs)	Total VOCs (lbs)	Notes
System shut down on 1/4/01. System restarted on 2/19/01 at 15:45.												
2/19/01	15:45	4,940	-	-	140	38	-					
2/22/01	17:00	5,016	-	-	140	46	-					
3/1/01	12:45	5,180	-	-	140	61	-					
3/8/01	7:30	5,343	-	-	145	33	-					
3/15/01	13:00	5,516	-	-	145	5.8	-					
3/22/01	13:00	5,682	-	-	145	3.7	-					
3/29/01	14:30	5,854	-	-	140	7.5	-	-	-	-	-	

NOTES:

TCE = trichloroethene
acfm = actual cubic feet per minute
°F = degrees Fahrenheit
hrs = hours
in-wc = inches of water column
lb/day = pounds per day
lbs = pounds
PID = photoionization detector
ppmv = parts per million by volume
scfm = standard cubic feet per minute
tr = trace (concentration detected at less than reporting limit)
VOCs = volatile organic compounds
- = no measurement
< = not detected at indicated method detection limit

1. PID calibrated with 100 ppmv of isobutylene.
2. Laboratory analyses were performed by Performance Analytical, Inc. in Simi Valley, California using EPA Method TO-14A.
3. Removal rates are calculated using analyte concentrations from laboratory analyses and the measured flow rate (converted from acfm to scfm using the measured vacuum).
4. Cumulative mass removal amounts are calculated as follows:
   A: Mass removal calculated using an average of the previous and current mass removal rates.
5. On days for which two flow and vacuum readings are provided, the values indicate initial and final readings during the site visit.
6. Although not shown on this table, mass removal rates were calculated for each VOC detected in the samples collected from well SVE-2. The total VOC mass removal rate presented in this table is the sum of the mass removal rates calculated for each VOC that was detected.
7. Extraction well SVE-2 is screened in the shallow vadose zone from 18 to 24 feet below ground surface.

TABLE 4d

Soil Vapor Extraction Data: Extraction Well SVE-3

Quarterly Progress Report for January through March 2001

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California

Date	Time	Elapsed Time on Hour Meter (hrs)	Flow (acfm)	Flow (scfm)	Vacuum (in-wc)	Total VOCs by PID (ppmv)	TCE Conc. by Lab (ppmv)	Estimated VOC Removal Rates: TCE (lb/day)	Estimated VOC Removal Rates: Total VOCs (lb/day)	Cumulative Mass Removal: TCE (lbs)	Cumulative Mass Removal: Total VOCs (lbs)	Notes
Static vapor sample collected on 3/16/00.												
3/16/00	9:57	5.6	0.41	0.37	35	31	**25**	0.0047	0.0054	0	0	
System Startup on 3/16/00 at 16:00.												
3/17/00	7:00	20.3	0.98	0.89	37	6.1	-					
3/18/00	6:30	44.7	0.98	0.89	38	8.3	-					
System shut down on 3/18/00 at 9:40. System restarted on 3/19/00 at 6:30.												
3/19/00	6:30	47.9	0.98	0.89	38	45	-					
3/20/00	6:30	72.2	0.98	0.88	43	7.4	-					
3/21/00	7:00	96.3	1.0	0.85	60	11	-					
3/22/00	7:30	120.5	0.95	0.91	15	10	-					
3/30/00	11:00	316.0	0.76	0.69	38	29	-					
4/6/00	11:00	483.0	1.6	1.1	125	25	-					
4/13/00	8:00	648.0	2.1	1.3	150	22	-					
4/20/00	7:30	815.0	1.7	1.1	145	6.8	-					
4/27/00	7:00	983.0	1.2	0.78	150	4.3	-					
5/4/00	8:30	1,152.0	1.6	0.98	150	2.8	-					
5/11/00	6:30	1,318.0	1.6	1.0	150	2.2	-					
5/18/00	7:00	1,486.0	1.6	0.98	150	9.0	-					
			1.6	0.98	150	9.0	-					
5/25/00	6:30	1,654.0	1.6	0.99	150	4.2	-					
6/1/00	6:30	1,822.0	1.5	0.95	150	7.5	-					
6/8/00	7:00	1,990.0	1.4	0.88	155	5.2	-					
6/15/00	7:30	2,158.0	1.4	0.90	150	4.9	-					
System shut down on 6/21/00 at 17:30. Static vapor sample collected on 7/6/00.												
7/6/00	8:46	2,312	2.3	1.5	130	7.3	**7.4**	0.0057	0.0095	0.50	0.71	4A
System restarted on 7/6/00 at 10:00.												
7/13/00	12:00	2,485	2.3	1.5	145	3.5	-					
7/20/00	7:30	2,648	2.2	1.4	150	4.1	-					
System shut down on 7/26/00 at 6:30. System restarted on 7/27/00 at 6:00.												
7/27/00	6:00	2,791	1.9	1.3	140	5.1	-					
8/3/00	8:00	2,961	1.9	1.2	140	2.2	-					
8/8/00	14:30	2,961	1.9	1.3	140	2.3	-					
System shut down on 8/15/00 at 11:30. System restarted on 8/21/00 at 10:30.												
8/24/00	12:30	3,326	2.0	1.3	140	1.9	-					

TABLE 4d

Soil Vapor Extraction Data: Extraction Well SVE-3

Quarterly Progress Report for January through March 2001

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California

Date	Time	Elapsed Time on Hour Meter (hrs)	Flow (acfm)	Flow (scfm)	Vacuum (in-wc)	Total VOCs by PID (ppmv)	TCE Conc. by Lab (ppmv)	Estimated VOC Removal Rates: TCE (lb/day)	Estimated VOC Removal Rates: Total VOCs (lb/day)	Cumulative Mass Removal: TCE (lbs)	Cumulative Mass Removal: Total VOCs (lbs)	Notes
System shut down on 8/30/00 at 13:30. System restarted on 8/31/00 at 9:00.												
8/31/00	9:00	3,471	1.4	1.0	120	2.6	-					
System shut down on 9/6/00 at 15:00. System restarted on 9/7/00.												
9/7/00	10:30	3,621	1.4	1.0	125	1.2	-					
9/14/00	9:00	3,788	1.5	1.0	140	1.5	**2.5**	0.0012	0.0028	0.71	1.1	4A
System shut down on 9/14/00 for rebound test. Static vapor sample collected on 9/28/00.												
9/28/00	9:52	3,788	-	-	120	8.0	**3.8**	-	-	-	-	
System shut down on 9/28/00 at 12:00. System restarted on 10/1/00 at 6:30.												
10/1/00	6:30	3,791	-	-	-	-	-					
System shut down on 10/1/00 at 10:30. System restarted on 10/5/00 at 7:30.												
10/5/00	7:30	3,795	1.8	1.3	120	4.6	-					
10/12/00	8:00	3,964	1.9	1.3	120	5.6	-					
10/19/00	8:00	4,132	1.9	1.3	120	4.1	-					
10/26/00	8:00	4,301	1.9	1.3	115	4.1	-					
System shut down on 10/31/00 at 9:20. System restarted on 11/2/00 at 8:00.												
11/2/00	8:00	4,422	7.1	4.7	140	0.5	-					
System shut down on 11/2/00 at 19:00. System restarted on 11/9/00 at 7:30.												
11/9/00	7:30	4,433	1.9	1.3	140	25.2	-					
System shut down on 11/9/00 at 15:30. System restarted on 11/16/00 at 10:00.												
11/16/00	10:00	4,441	-	-	140	8.9	-					
System shut down on 11/17/00 at 12:00. System restarted on 11/23/00 at 7:30.												
11/23/00	7:30	4,443	-	-	140	11.9	-					
11/30/00	7:30	4,611	5.6	3.6	140	6.2	-					
System shut down on 12/6/00 at 21:00. System restarted on 12/7/00 at 8:00.												
12/7/00	8:00	4,768	-	-	140	14.4	-					
12/14/00	10:30	4,940	2.3	1.5	140	1.2	**1.2**	0.00089	0.0023	0.76	1.2	4A
System shut down on 12/14/00 for rebound test.												
1/4/01	9:45	4,940	2.1	1.5	120	1.5	**1.3**	-	-	-	-	

TABLE 4d

Soil Vapor Extraction Data: Extraction Well SVE-3

Quarterly Progress Report for January through March 2001

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California

Date	Time	Elapsed Time on Hour Meter (hrs)	Flow		Vacuum (in-wc)	Total VOCs by PID (ppmv)	TCE Conc. by Lab (ppmv)	Estimated VOC Removal Rates		Cumulative Mass Removal		
			(acfm)	(scfm)				TCE (lb/day)	Total VOCs (lb/day)	TCE (lbs)	Total VOCs (lbs)	Notes
System shut down on 1/4/01. System restarted on 2/19/01 at 15:45.												
2/19/01	15:45	4,940	3.8	2.5	140	6.0	-					
2/22/01	17:00	5,016	3.4	2.2	140	6.4	-					
3/1/01	12:45	5,180	2.6	1.7	140	6.3	-					
3/8/01	7:30	5,343	2.6	1.7	145	0.0	-					
3/15/01	13:00	5,516	2.6	1.7	145	0.5	-					
3/22/01	13:00	5,682	2.6	1.7	145	3.3	-					
3/29/01	14:30	5,854	2.7	1.7	140	8.3	-	-	-	-	-	

NOTES:

TCE = trichloroethene
acfm = actual cubic feet per minute
°F = degrees Fahrenheit
hrs = hours
in-wc = inches of water column
lb/day = pounds per day
lbs = pounds
PID = photoionization detector
ppmv = parts per million by volume
scfm = standard cubic feet per minute
tr = trace (concentration detected at less than reporting limit)
VOCs = volatile organic compounds
- = no measurement
< = not detected at indicated method detection limit

1. PID calibrated with 100 ppmv of isobutylene.
2. Laboratory analyses were performed by Performance Analytical, Inc. in Simi Valley, California using EPA Method TO-14A.
3. Removal rates are calculated using analyte concentrations from laboratory analyses and the measured flow rate (converted from acfm to scfm using the measured vacuum).
4. Cumulative mass removal amounts are calculated as follows:
   A: Mass removal calculated using an average of the previous and current mass removal rates.
5. On days for which two flow and vacuum readings are provided, the values indicate initial and final readings during the site visit.
6. Although not shown on this table, mass removal rates were calculated for each VOC detected in the samples collected from well SVE-3. The total VOC mass removal rate presented in this table is the sum of the mass removal rates calculated for each VOC that was detected.
7. Extraction well SVE-3 is screened in the shallow vadose zone from 19 to 25 feet below ground surface.

TABLE 4e

Soil Vapor Extraction Data: Extraction Well SVE-D1

Quarterly Progress Report for January through March 2001

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California

Date	Time	Elapsed Time on Hour Meter (hrs)	Flow (acfm)	Flow (scfm)	Vacuum (in-wc)	Total VOCs by PID (ppmv)	TCE Conc. by Lab (ppmv)	Estimated VOC Removal Rates: TCE (lb/day)	Estimated VOC Removal Rates: Total VOCs (lb/day)	Cumulative Mass Removal: TCE (lbs)	Cumulative Mass Removal: Total VOCs (lbs)	Notes
Static vapor sample collected on 3/16/00.												
3/16/00	8:57	5.6	3.7	3.6	6.0	1,580	**1,000**	1.8	1.9	0	0	
System startup on 3/16/00 at 16:00.												
3/17/00	7:00	20.3	4.6	4.5	10	92	-					
3/18/00	6:30	44.7	5.3	5.2	10	131	-					
System shut down on 3/18/00 at 9:40. System restarted on 3/19/00 at 6:30.												
3/19/00	6:30	48	0.0	0.0	0.0	30	0					
3/20/00	6:30	72	5.8	5.7	9.0	164	0					
3/21/00	7:00	96	2.6	2.6	7.0	560	0					
3/22/00	7:30	121	8.9	8.6	15	70	**440**	1.9	2.0	8.8	9.1	4A
3/30/00	11:00	316	24	22	38	36	0					
4/6/00	11:00	483	25	17	125	30	0					
4/13/00	8:00	648	33	21	150	33	**25**	0.26	0.28	32	34	4A
4/20/00	7:30	815	28	18	145	28	0					
4/27/00	7:00	983	18	16	40	25	0					
5/4/00	8:30	1,152	16	10	135	20	0					
5/11/00	6:30	1,318	13	9.7	95	13	0					
5/18/00	7:00	1,486	20	14	120	37	**8.6**	0.061	0.070	38	40	4A
			26	17	150	37	-	0.071	0.081	-	-	
5/25/00	6:30	1,654	18	11	150	16	-					
6/1/00	6:30	1,822	16	10	150	31	-					
6/8/00	7:00	1,990	21	13	155	31	-					
6/15/00	7:30	2,158	21	13	150	31	-					
System shut down on 6/21/00 at 17:30. Static vapor sample collected on 7/6/00.												
7/6/00	9:34	2,312	0	0	0	30	**92**	-	-	-	-	
System restarted on 7/6/00 at 10:00.												
7/13/00	12:00	2,485	34	22	145	37	**5.1**	0.056	0.25	40	47	4A
7/20/00	7:30	2,648	32	20	150	27	-					
System shut down on 7/26/00 at 6:30. System restarted on 7/27/00 at 6:00.												
7/27/00	6:00	2,791	26	17	140	9.4	-					
8/3/00	8:00	2,961	26	17	140	1.5	-					
8/8/00	14:30	3,086	26	17	140	1.8	-					
System shut down on 8/15/00 at 11:30. System restarted on 8/21/00 at 10:30.												

TABLE 4e

Soil Vapor Extraction Data: Extraction Well SVE-D1

Quarterly Progress Report for January through March 2001

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California

Date	Time	Elapsed Time on Hour Meter (hrs)	Flow		Vacuum (in-wc)	Total VOCs by PID (ppmv)	TCE Conc. by Lab (ppmv)	Estimated VOC Removal Rates		Cumulative Mass Removal		Notes
			(acfm)	(scfm)				TCE (lb/day)	Total VOCs (lb/day)	TCE (lbs)	Total VOCs (lbs)	
8/24/00	12:30	3,226	27	18	140	17	-					
System shut down on 8/30/00 at 13:30. System restarted on 8/31/00 at 9:00.												
8/31/00	9:00	3,471	21	15	120	8.9	-					
System shut down on 9/6/00 at 15:00. System restarted on 9/7/00.												
9/7/00	10:30	3,621	22	15	125	5.8	-					
9/14/00	9:00	3,788	20	13	140	24	**4.0**	0.026	0.23	43	60	4A
System shut down on 9/14/00 for rebound test. Static vapor sample collected on 9/28/00.												
9/28/00	10:25	3,788	52	36	120	62	**120**	-	-	-	-	
System shut down on 9/28/00 at 12:00. System restarted on 10/1/00 at 6:30.												
10/1/00	6:30	3,791	-	-	-	-	-					
System shut down on 10/1/00 at 10:30. System restarted on 10/5/00 at 7:30.												
10/5/00	7:30	3,795	29	21	120	41	-					
10/12/00	8:00	3,964	28	20	120	72	-					
10/19/00	8:00	4,132	19	14	120	6.2	-					
10/26/00	8:00	4,301	20	14	115	5.8	**2.4**	0.017	0.081	43	63	4A
System shut down on 10/31/00 at 9:20. System restarted on 11/2/00 at 8:00.												
11/2/00	8:00	4,422	22	15	140	1.5	-					
System shut down on 11/2/00 at 19:00. System restarted on 11/9/00 at 7:30.												
11/9/00	7:30	4,433	22	15	140	4.9	-					
System shut down on 11/9/00 at 15:30. System restarted on 11/16/00 at 10:00.												
11/16/00	10:00	4,441	24	15	140	38	-					
System shut down on 11/17/00 at 12:00. System restarted on 11/23/00 at 7:30.												
11/23/00	7:30	4,443	24	16	140	29	-					
11/30/00	7:30	4,611	-	-	140	23	-					
System shut down on 12/6/00 at 21:00. System restarted on 12/7/00 at 8:00.												
12/7/00	8:00	4,768	-	-	140	12	-					
12/14/00	10:30	4,940	16	11	140	3.1	**2.7**	0.014	0.025	44	64	4A
System shut down on 12/14/00 for rebound test.												
1/4/01	10:48	4,940	74	52	120	43	**41**	-	-	-	-	

TABLE 4e

Soil Vapor Extraction Data: Extraction Well SVE-D1

Quarterly Progress Report for January through March 2001

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California

Date	Time	Elapsed Time on Hour Meter (hrs)	Flow		Vacuum (in-wc)	Total VOCs by PID (ppmv)	TCE Conc. by Lab (ppmv)	Estimated VOC Removal Rates		Cumulative Mass Removal		
			(acfm)	(scfm)				TCE (lb/day)	Total VOCs (lb/day)	TCE (lbs)	Total VOCs (lbs)	Notes
System shut down on 1/4/01. System restarted on 2/19/01 at 15:45.												
2/19/01	15:45	4,940	23	15	140	43	-					
2/22/01	17:00	5,016	24	15	140	37	-					
3/1/01	12:45	5,180	24	15	140	81	-					
3/8/01	7:30	5,343	23	15	145	103	-					
3/15/01	13:00	5,516	22	14	145	9.4	-					
3/22/01	13:00	5,682	21	14	145	12	-					
3/29/01	14:30	5,854	21	14	130	10	-	-	-	-	-	

NOTES:

TCE = trichloroethene
acfm = actual cubic feet per minute
°F = degrees Fahrenheit
hrs = hours
in-wc = inches of water column
lb/day = pounds per day
lbs = pounds
PID = photoionization detector
ppmv = parts per million by volume
scfm = standard cubic feet per minute
tr = trace (concentration detected at less than reporting limit)
VOCs = volatile organic compounds
- = no measurement
< = not detected at indicated method detection limit

1. PID calibrated with 100 ppmv of isobutylene.
2. Laboratory analyses were performed by Performance Analytical, Inc. in Simi Valley, California using EPA Method TO-14A.
3. Removal rates are calculated using analyte concentrations from laboratory analyses and the measured flow rate (converted from acfm to scfm using the measured vacuum).
4. Cumulative mass removal amounts are calculated as follows:
   A: Mass removal calculated using an average of the previous and current mass removal rates.
5. On days for which two flow and vacuum readings are provided, the values indicate initial and final readings during the site visit.
6. Although not shown on this table, mass removal rates were calculated for each VOC detected in the samples collected from well SVE-D1. The total VOC mass removal rate presented in this table is the sum of the mass removal rates calculated for each VOC that was detected.
7. Extraction well SVE-D1 is screened in the shallow vadose zone from 30 to 40 feet below ground surface.

TABLE 4f
Soil Vapor Extraction Data:
Monitoring/Extraction Well VMP-D1

Quarterly Progress Report for January through March 2001

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California

Date	Time	Elapsed Time on Hour Meter (hrs)	Flow		Vacuum (in-wc)	Total VOCs by PID (ppmv)	TCE Conc. by Lab (ppmv)	Estimated VOC Removal Rates		Cumulative Mass Removal		
			(acfm)	(scfm)				TCE (lb/day)	Total VOCs (lb/day)	TCE (lbs)	Total VOCs (lbs)	Notes
	Static vapor sample collected on 3/16/00.											
3/16/00	10:32	5.6	0	0	0	282	**460**					
	System startup on 3/16/00 at 16:00 with VMP-D1 used as a monitoring well.											
4/6/00	11:00	483	0	0	0	3.5	-					
4/13/00	8:00	648	0	0	0	23	-					
	System shut down on 6/21/00 at 17:30. Static vapor sample collected on 7/6/00.											
7/6/00	8:57	2,312	35	24	130	30	**9.4**	0.11	0.12	0	0	
	System restarted on 7/6/00 at 10:00 with VMP-D1 operating as an extraction well.											
7/13/00	12:00	2,485	33	21	145	3.6	0					
7/20/00	7:30	2,648	34	22	150	3.2	-					
7/27/00	6:00	2,791	26	17	140	9.4	-					
8/3/00	8:00	2,961	25	16	140	1.5	-					
8/8/00	14:30	3,086	24	16	140	1.6	-					
	System shut down on 8/15/00 at 11:30. System restarted on 8/21/00 at 10:30.											
8/24/00	12:30	3,326	22	15	140	2.1	-					
	System shut down on 8/30/00 at 13:30. System restarted on 8/31/00 at 9:00.											
8/31/00	9:00	3,471	19	14	120	0.9	-					
	System shut down on 9/6/00 at 15:00. System restarted on 9/7/00.											
9/7/00	10:30	3,621	20	14	125	0.2	-					
9/14/00	9:00	3,788	20	-	140	1.2	**1.4**	0.0090	0.012	3.7	4.2	4A
	System shut down on 9/14/00 for rebound test. Static vapor sample collected on 9/28/00.											
9/28/00	10:08	3,788	59	41	120	6.3	**8.6**	-	-	-	-	
	System shut down on 9/28/00 at 12:00. System restarted on 10/1/00 at 6:30.											
10/1/00	6:30	3,791	-	-	-	-	-					
	System shut down on 10/1/00 at 10:30. System restarted on 10/5/00 at 7:30.											
10/5/00	7:30	3,795	25	18	120	8.4	-					
10/12/00	8:00	3,964	24	17	120	6.7	-					
10/19/00	8:00	4,132	25	17	120	9.4	-					
10/26/00	8:00	4,301	22	16	115	24	-					
	System shut down on 10/31/00 at 9:20. System restarted on 11/2/00 at 8:00.											

TABLE 4f

Soil Vapor Extraction Data:

Monitoring/Extraction Well VMP-D1

Quarterly Progress Report for January through March 2001

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California

Date	Time	Elapsed Time on Hour Meter (hrs)	Flow (acfm)	Flow (scfm)	Vacuum (in-wc)	Total VOCs by PID (ppmv)	TCE Conc. by Lab (ppmv)	Estimated VOC Removal Rates: TCE (lb/day)	Estimated VOC Removal Rates: Total VOCs (lb/day)	Cumulative Mass Removal: TCE (lbs)	Cumulative Mass Removal: Total VOCs (lbs)	Notes
11/2/00	8:00	4,422	26	17	140	0	-					
System shut down on 11/2/00 at 19:00. System restarted on 11/9/00 at 7:30.												
11/9/00	7:30	4,433	-	-	140	59	-					
System shut down on 11/9/00 at 15:30. System restarted on 11/16/00 at 10:00.												
11/16/00	10:00	4,441	64	42	140	8.6	-					
System shut down on 11/17/00 at 12:00. System restarted on 11/23/00 at 7:30.												
11/23/00	7:30	4,443	60	40	140	87.4	-					
11/30/00	7:30	4,611	39	26	140	27.9	-					
System shut down on 12/6/00 at 21:00. System restarted on 12/7/00 at 8:00.												
12/7/00	8:00	4,768	42	27	140	29.3	-					
12/14/00	10:30	4,940	15	10	140	0.3	**0.95**	0.0047	0.0065	4.0	4.6	4A
System shut down on 12/14/00 for rebound test.												
1/4/01	9:57	4,940	76	53	120	0.6	**1.6**	-	-	-	-	
System shut down on 1/4/01. System restarted on 2/19/01 at 15:45.												
2/19/01	15:45	4,940	22	15	140	1.2	-					
2/22/01	17:00	5,016	23	15	140	0.0	-					
3/1/01	12:45	5,180	18	12	140	0.0	-					
3/8/01	7:30	5,343	19	12	145	0.0	-					
3/15/01	13:00	5,516	18	12	145	0.8	-					
3/22/01	13:00	5,682	19	12	145	0.2	-					
3/29/01	14:30	5,854	19	13	140	0.6	-					

TABLE 4f

Soil Vapor Extraction Data:

Monitoring/Extraction Well VMP-D1

Quarterly Progress Report for January through March 2001

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California

Date	Time	Elapsed Time on Hour Meter (hrs)	Flow		Vacuum (in-wc)	Total VOCs by PID (ppmv)	TCE Conc. by Lab (ppmv)	Estimated VOC Removal Rates		Cumulative Mass Removal		
			(acfm)	(scfm)				TCE (lb/day)	Total VOCs (lb/day)	TCE (lbs)	Total VOCs (lbs)	Notes

NOTES:

TCE = trichloroethene
acfm = actual cubic feet per minute
°F = degrees Fahrenheit
hrs = hours
in-wc = inches of water column
lb/day = pounds per day
lbs = pounds
PID = photoionization detector
ppmv = parts per million by volume
scfm = standard cubic feet per minute
tr = trace (concentration detected at less than reporting limit)
VOCs = volatile organic compounds
- = no measurement
< = not detected at indicated method detection limit

1. PID calibrated with 100 ppmv of isobutylene.
2. Laboratory analyses were performed by Performance Analytical, Inc. in Simi Valley, California using EPA Method TO-14A.
3. Removal rates are calculated using analyte concentrations from laboratory analyses and the measured flow rate (converted from acfm to scfm using the measured vacuum).
4. Cumulative mass removal amounts are calculated as follows:
   A: Mass removal calculated using an average of the previous and current mass removal rates.
5. Well VMP-D1 was first used as an extraction well on 6 July 2000.
6. Although not shown on this table, mass removal rates were calculated for each VOC detected in the samples collected from well VMP-D1. The total VOC mass removal rate presented in this table is the sum of the mass removal rates calculated for each VOC that was detected.
7. Extraction well VMP-D1 is screened in the deep vadose zone from 30 to 40 feet below ground surface.

TABLE 4g

Soil Vapor Extraction Data:

Monitoring/Extraction Well VMP-D2

Quarterly Progress Report for January through March 2001

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California

Date	Time	Elapsed Time on Hour Meter (hrs)	Flow (acfm)	Flow (scfm)	Vacuum (in-wc)	Total VOCs by PID (ppmv)	TCE Conc. by Lab (ppmv)	Estimated VOC Removal Rates: TCE (lb/day)	Estimated VOC Removal Rates: Total VOCs (lb/day)	Cumulative Mass Removal: TCE (lbs)	Cumulative Mass Removal: Total VOCs (lbs)	Notes
Static vapor sample collected on 3/16/00.												
3/16/00	10:50	5.6	0	0	0	76	**39**					
System startup on 3/16/00 at 16:00 with VMP-D2 used as a monitoring well.												
4/6/00	11:00	483	0	0	0	150	-					
4/13/00	8:00	648	0	0	0	27	-					
System shut down on 6/21/00 at 17:30. Static vapor sample collected on 7/6/00.												
7/6/00	9:12	2,312	44	30	130	5.2	**5.7**	0.085	0.10	0	0	
System restarted on 7/6/00 at 10:00 with VMP-D2 operating as an extraction well.												
7/13/00	12:00	2,485	41	26	145	5.8	-					
7/20/00	7:30	2,648	42	27	150	3.8	-					
7/27/00	6:00	2,791	21	14	140	8.7	-					
8/3/00	8:00	2,961	21	14	140	4.8	-					
8/8/00	14:30	3,086	22	14	140	4.3	-					
System shut down on 8/15/00 at 11:30. System restarted on 8/21/00 at 10:30.												
8/24/00	12:30	3,326	26	17	140	8.8	-					
System shut down on 8/30/00 at 13:30. System restarted on 8/31/00 at 9:00.												
8/31/00	9:00	3,471	18	13	120	1.5	-					
System shut down on 9/6/00 at 15:00. System restarted on 9/7/00.												
9/7/00	10:30	3,621	17	12	125	0.6	-					
9/14/00	9:00	3,788	17	11	140	9.6	**0.71**	0.0040	0.038	2.8	4.4	4A
System shut down on 9/14/00 for rebound test. Static vapor sample collected on 9/28/00.												
9/28/00	9:35	3,788	42	29	125	39	**9.3**	-	-	-	-	
System shut down on 9/28/00 at 12:00. System restarted on 10/1/00 at 6:30.												
10/1/00	6:30	3,791	-	-	-	-	-					
System shut down on 10/1/00 at 10:30. System restarted on 10/5/00 at 7:30.												
10/5/00	7:30	3,795	23	16	120	24	-					
10/12/00	8:00	3,964	26	18	120	9.1	-					
10/19/00	8:00	4,132	25	18	120	10	-					
10/26/00	8:00	4,301	19	14	115	26	-					
System shut down on 10/31/00 at 9:20. System restarted on 11/2/00 at 8:00.												

TABLE 4g

Soil Vapor Extraction Data:

Monitoring/Extraction Well VMP-D2

Quarterly Progress Report for January through March 2001

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California

Date	Time	Elapsed Time on Hour Meter (hrs)	Flow		Vacuum (in-wc)	Total VOCs by PID (ppmv)	TCE Conc. by Lab (ppmv)	Estimated VOC Removal Rates		Cumulative Mass Removal		
			(acfm)	(scfm)				TCE (lb/day)	Total VOCs (lb/day)	TCE (lbs)	Total VOCs (lbs)	Notes
11/2/00	8:00	4,422	23	15	140	0	-					
System shut down on 11/2/00 at 19:00. System restarted on 11/9/00 at 7:30.												
11/9/00	7:30	4,433	-	-	140	14	-					
System shut down on 11/9/00 at 15:30. System restarted on 11/16/00 at 10:00.												
11/16/00	10:00	4,441	-	-	140	15	-					
System shut down on 11/17/00 at 12:00. System restarted on 11/23/00 at 7:30.												
11/23/00	7:30	4,443	47	31	140	63	-					
11/30/00	7:30	4,611	28	18	140	45	-					
System shut down on 12/6/00 at 21:00. System restarted on 12/7/00 at 8:00.												
12/7/00	8:00	4,768	11	7.4	140	40	-					
12/14/00	10:30	4,940	18	12	140	14	**1.3**	0.0078	0.091	3.0	7.5	4A
System shut down on 12/14/00 for rebound test.												
1/4/01	9:57	4,940	78	55	120	3.4	**3.0**	-	-	-	-	
System shut down on 1/4/01. System restarted on 2/19/01 at 15:45.												
2/19/01	15:45	4,940	21	14	140	73.4	-					
2/22/01	17:00	5,016	21	14	140	81.9	-					
3/1/01	12:45	5,180	20	13	140	185.4	-					
3/8/01	7:30	5,343	22	14	145	153.3	-					
3/15/01	13:00	5,516	24	15	145	5.2	-					
3/22/01	13:00	5,682	15	10	145	3.2	-					
3/29/01	14:30	5,854	19	13	140	2.6	-					

TABLE 4g

Soil Vapor Extraction Data:

Monitoring/Extraction Well VMP-D2

Quarterly Progress Report for January through March 2001

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California

Date	Time	Elapsed Time on Hour Meter (hrs)	Flow		Vacuum (in-wc)	Total VOCs by PID (ppmv)	TCE Conc. by Lab (ppmv)	Estimated VOC Removal Rates		Cumulative Mass Removal		
			(acfm)	(scfm)				TCE (lb/day)	Total VOCs (lb/day)	TCE (lbs)	Total VOCs (lbs)	Notes

NOTES:

TCE = trichloroethene
acfm = actual cubic feet per minute
°F = degrees Fahrenheit
hrs = hours
in-wc = inches of water column
lb/day = pounds per day
lbs = pounds
PID = photoionization detector
ppmv = parts per million by volume
scfm = standard cubic feet per minute
tr = trace (concentration detected at less than reporting limit)
VOCs = volatile organic compounds
- = no measurement
< = not detected at indicated method detection limit

1. PID calibrated with 100 ppmv of isobutylene.
2. Laboratory analyses were performed by Performance Analytical, Inc. in Simi Valley, California using EPA Method TO-14A.
3. Removal rates are calculated using analyte concentrations from laboratory analyses and the measured flow rate (converted from acfm to scfm using the measured vacuum).
4. Cumulative mass removal amounts are calculated as follows:
   A: Mass removal calculated using an average of the previous and current mass removal rates.
5. Well VMP-D1 was first used as an extraction well on 6 July 2000.
6. Although not shown on this table, mass removal rates were calculated for each VOC detected in the samples collected from well VMP-D2. The total VOC mass removal rate presented in this table is the sum of the mass removal rates calculated for each VOC that was detected.
7. Extraction well VMP-D2 is screened in the deep vadose zone from 30 to 40 feet below ground surface.

TABLE 4h

Soil Vapor Extraction Data:

Monitoring/Extraction Well VMP-1

Quarterly Progress Report for January through March 2001

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California

Date	Time	Elapsed Time on Hour Meter (hrs)	Flow (acfm)	Flow (scfm)	Vacuum (in-wc)	Total VOCs by PID (ppmv)	TCE Conc. by Lab (ppmv)	Estimated VOC Removal Rates: TCE (lb/day)	Estimated VOC Removal Rates: Total VOCs (lb/day)	Cumulative Mass Removal: TCE (lbs)	Cumulative Mass Removal: Total VOCs (lbs)	Notes
Static vapor sample collected on 3/16/00.												
3/16/00	11:35	5.6	0	0	0	65	**29**	-	-	-	-	
System startup on 3/16/00 at 16:00 with VMP-1 used as a monitoring well.												
4/6/00	11:00	483.0	0	0	0	6.4	-					
4/13/00	8:00	648.0	0	0	0	8.2	-					
Static vapor sample collected on 7/6/00.												
7/6/00	8:06	2,312.0	0	0	0	0.0	**0.13**	-	-	-	-	
Vapor sample collected on 9/14/00.												
9/14/00	11:08	3,788.0	0	0	0	0.5	**0.29**	-	-	-	-	
Static vapor sample collected on 9/28/00.												
9/28/00	8:51	3,788.0	0	0	0	1.3	**0.47**	-	-	-	-	
10/26/00	8:00	4,301.0	0	0	0	13	-					
Static vapor sample collected on 1/4/01.												
1/4/01	9:15	4,940.0	0	0	0	0.9	**0.93**	-	-	-	-	
VMP-1 converted to extraction well on 3/8/01.												
3/8/01	7:30	5,343.0	-	-	145	6.4	-					
2/22/01	17:00	5,016	23	15	140	0.0	-					
3/1/01	12:45	5,180	18	12	140	0.0	-					
3/8/01	7:30	5,343	19	12	145	0.0	-					
3/15/01	13:00	5,516	18	12	145	0.8	-					
3/22/01	13:00	5,682	19	12	145	0.2	-					
3/29/01	14:30	5,854	19	13	140	0.6	-					

TABLE 4h

Soil Vapor Extraction Data:

Monitoring/Extraction Well VMP-1

Quarterly Progress Report for January through March 2001

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California

Date	Time	Elapsed Time on Hour Meter (hrs)	Flow		Vacuum (in-wc)	Total VOCs by PID (ppmv)	TCE Conc. by Lab (ppmv)	Estimated VOC Removal Rates		Cumulative Mass Removal		
			(acfm)	(scfm)				TCE (lb/day)	Total VOCs (lb/day)	TCE (lbs)	Total VOCs (lbs)	Notes

NOTES:

TCE = trichloroethene
acfm = actual cubic feet per minute
°F = degrees Fahrenheit
hrs = hours
in-wc = inches of water column
lb/day = pounds per day
lbs = pounds
PID = photoionization detector
ppmv = parts per million by volume
scfm = standard cubic feet per minute
tr = trace (concentration detected at less than reporting limit)
VOCs = volatile organic compounds
- = no measurement
< = not detected at indicated method detection limit

1. PID calibrated with 100 ppmv of isobutylene.
2. Laboratory analyses were performed by Performance Analytical, Inc. in Simi Valley, California using EPA Method TO-14A.
3. Well VMP-1 was first used as an extraction well on 8 March 2001.
4. Extraction well VMP-1 is screened in the shallow vadose zone from 19 to 25 feet below ground surface.

TABLE 5

Field Data for Soil Vapor Monitoring Probes

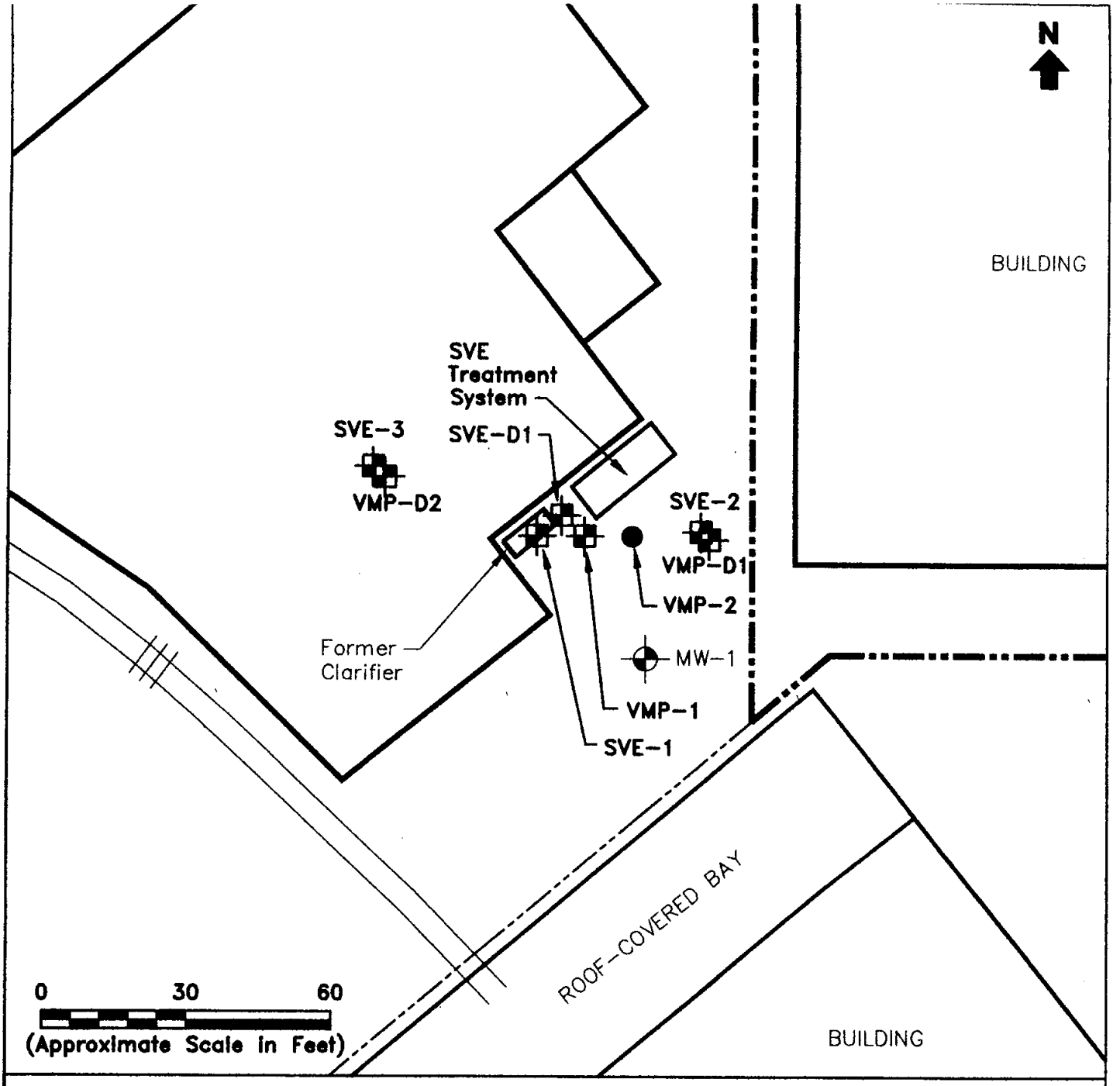
Quarterly Progress Report for January through March 2001

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California

Date	VMP-1		VMP-2		VMP-D1		VMP-D2	
	Vacuum (in-wc)	Total VOCs by PID [1,2] (ppmv)	Vacuum (in-wc)	Total VOCs by PID [1,2] (ppmv)	Vacuum (in-wc)	Total VOCs by PID [1,3] (ppmv)	Vacuum (in-wc)	Total VOCs by PID [1,3] (ppmv)
3/16/00	-	68	-	150	-	530	-	71
3/17/00	1.8	-	1.0	-	4.7	-	5.2	-
3/18/00	1.3	-	1.1	-	6.6	-	6.0	-
3/19/00	1.1	-	0.7	-	2.2	-	2.4	-
3/20/00	2.1	-	1.4	-	2.6	-	3.5	-
3/21/00	2.4	-	2.2	-	5.4	-	6.8	-
3/22/00	2.6	-	2.3	-	5.8	-	4.5	-
3/30/00	1.8	-	1.8	-	15	-	16	-
4/6/00	2.8	6.4	4.2	7.4	23	3.5	24	150
4/13/00	4.0	8.2	2.5	6.2	21	23	22	27
5/11/00	4.6	-	4.0	-	19	-	16	-
5/18/00	3.2	-	3.4	-	17	-	18	-
	3.8	-	2.7	-	21	-	22	-
7/6/00	-	0.0	-	2.6	-	-	-	-
7/13/00	2.6	-	1.9	-	-	-	-	-
7/20/00	2.9	-	2.1	-	-	-	-	-
7/27/00	2.6	-	1.9	-	-	-	-	-
9/14/00	5.2	0.5	2.4	0.7	-	-	-	-
9/28/00	-	1.3	-	2.4	-	-	-	-
10/26/00	11.5	13.2	11.5	2.2	-	-	-	-
12/14/00	7.3	-	0.6	-	-	-	-	-
1/4/01	-	0.9	-	0.4	-	-	-	-

NOTES: in-wc = inches of water column
PID = photoionization detector
ppmv = parts per million by volume
VOCs = volatile organic compounds
- = no measurement

1. PID calibrated with 100 ppmv of isobutylene.
2. Each shallow vapor monitoring probe was purged of approximately 5 to 7 cubic feet of vapor and then sampled and analyzed using a PID.
3. Each deep vapor monitoring probe was purged of approximately 50 to 65 cubic feet of vapor and then sampled and analyzed using a PID.
4. On days for which two vacuum and PID readings are provided, the values indicate initial and final readings during the site visit.
5. Probes VMP-D1 and VMP-D2 have been used as extraction wells since 6 July 2000. For data collected at wells VMP-D1 and VMP-D2, see Tables 4f and 4g, respectively.
6. Probe VMP-1 has been used as an extraction well since 8 March 2001 (see Table 4h).
7. Soil vapor monitoring probes VMP-1 and VMP-2 are screened in the shallow vadose zone from approximately 19 to 25 feet beneath the ground surface.
8. Soil vapor monitoring probes VMP-D1 and VMP-D2 are screened in the deep vadose zone from approximately 30 to 40 and 31 to 41 feet beneath the ground surface, respectively.



LEGEND

- Location of Soil Vapor Extraction Wells
- Location of Vapor Monitoring Probe
- Location of Groundwater Monitoring Well
- Property Line/Site Boundary
- Building
- Railroad Spur

Notes:

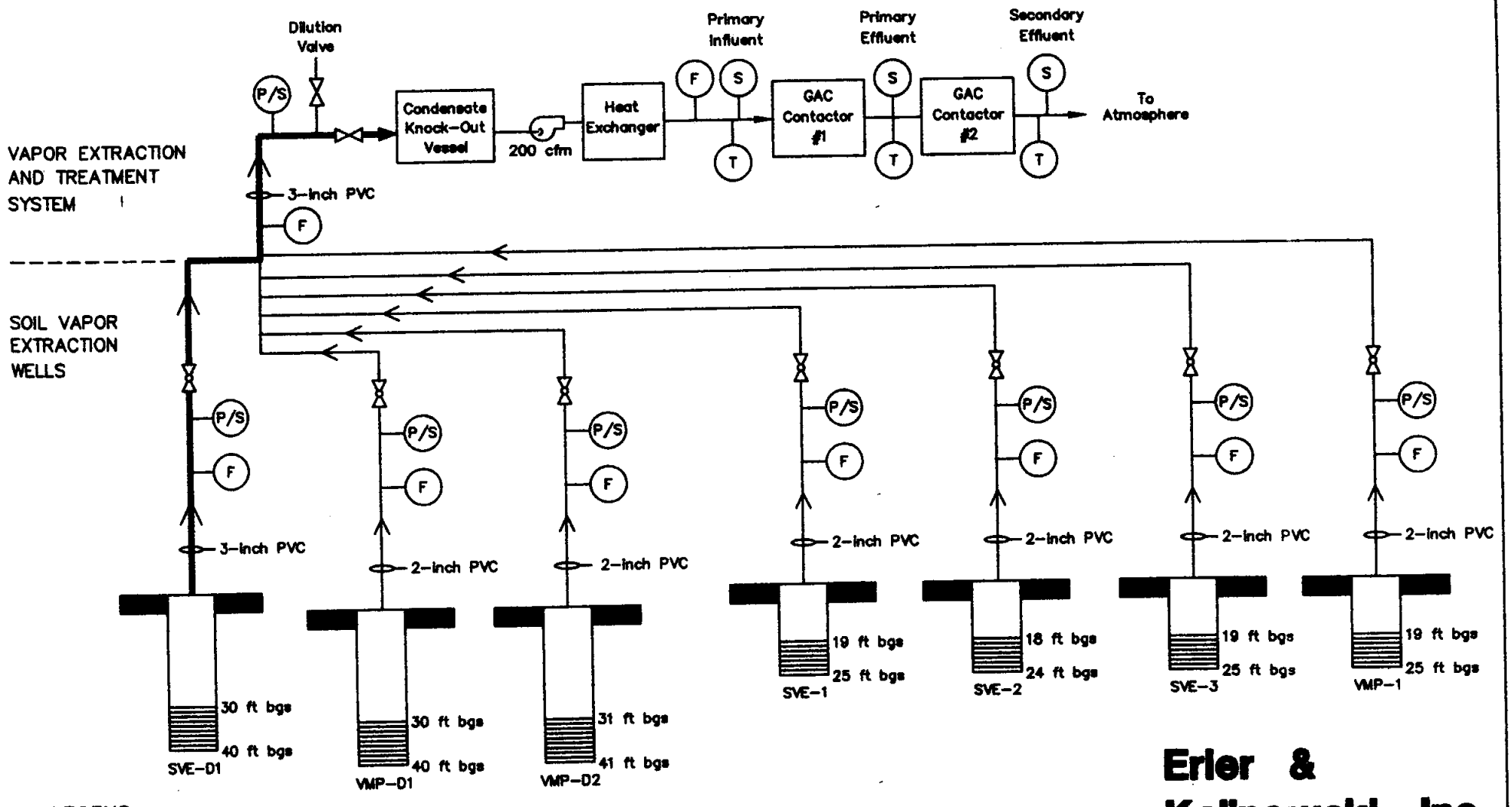
1. All locations are approximate.
2. SVE = Soil Vapor Extraction

Erler & Kalinowski, Inc.

Layout of the Soil Vapor Extraction System

Jervis B. Webb Company of California
South Gate, California
April 2001
EKI 991103.01

Figure 7



LEGEND

- F — Flow Port
- P/S — Pressure/Sample Port
- S — Sample Port
- T — Temperature Gage
- Ball Valve
- Gate Valve
- Well Screen
- Flow Direction
- SVE Blower

Notes:

1. Not to scale.
2. Pressure/Sampling Ports are 1/4" hose barbs.
3. Abbreviations:
   - cfm = cubic feet per minute
   - ft bgs = feet below ground surface
   - GAC = granular activated carbon
   - SVE = soil vapor extraction

Erler & Kalinowski, Inc.

Soil Vapor Extraction System Schematic

Jervis B. Webb Company of California
South Gate, California
April 2001
EKI 991103.01
Figure 8

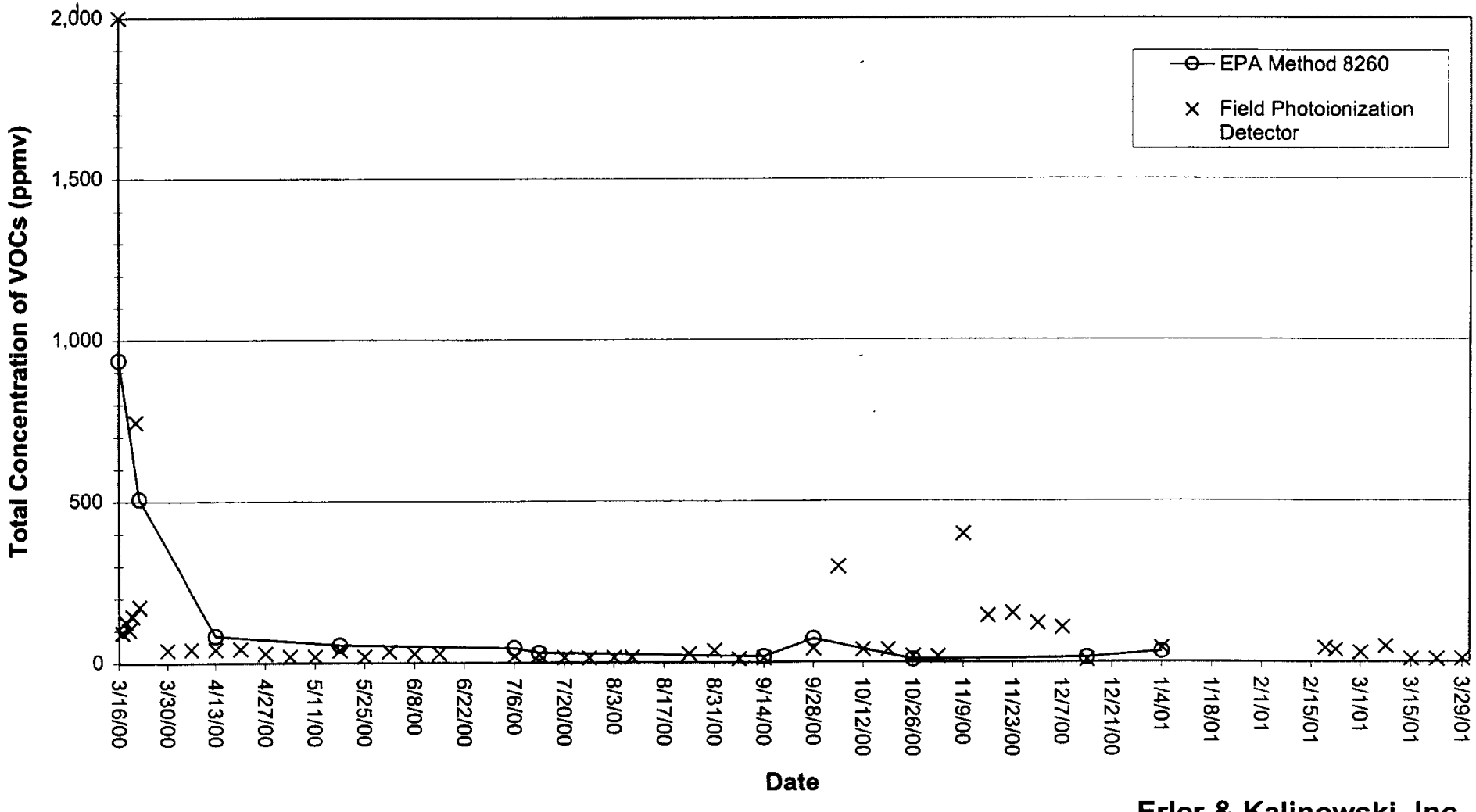
000671

FIGURE 9a

Concentrations of Total VOCs versus Time: Blower Influent

Quarterly Progress Report for January through March 2001

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California



EKI 991103.01
2001-Q1 Table 4 & Figure 9

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30 April 2001

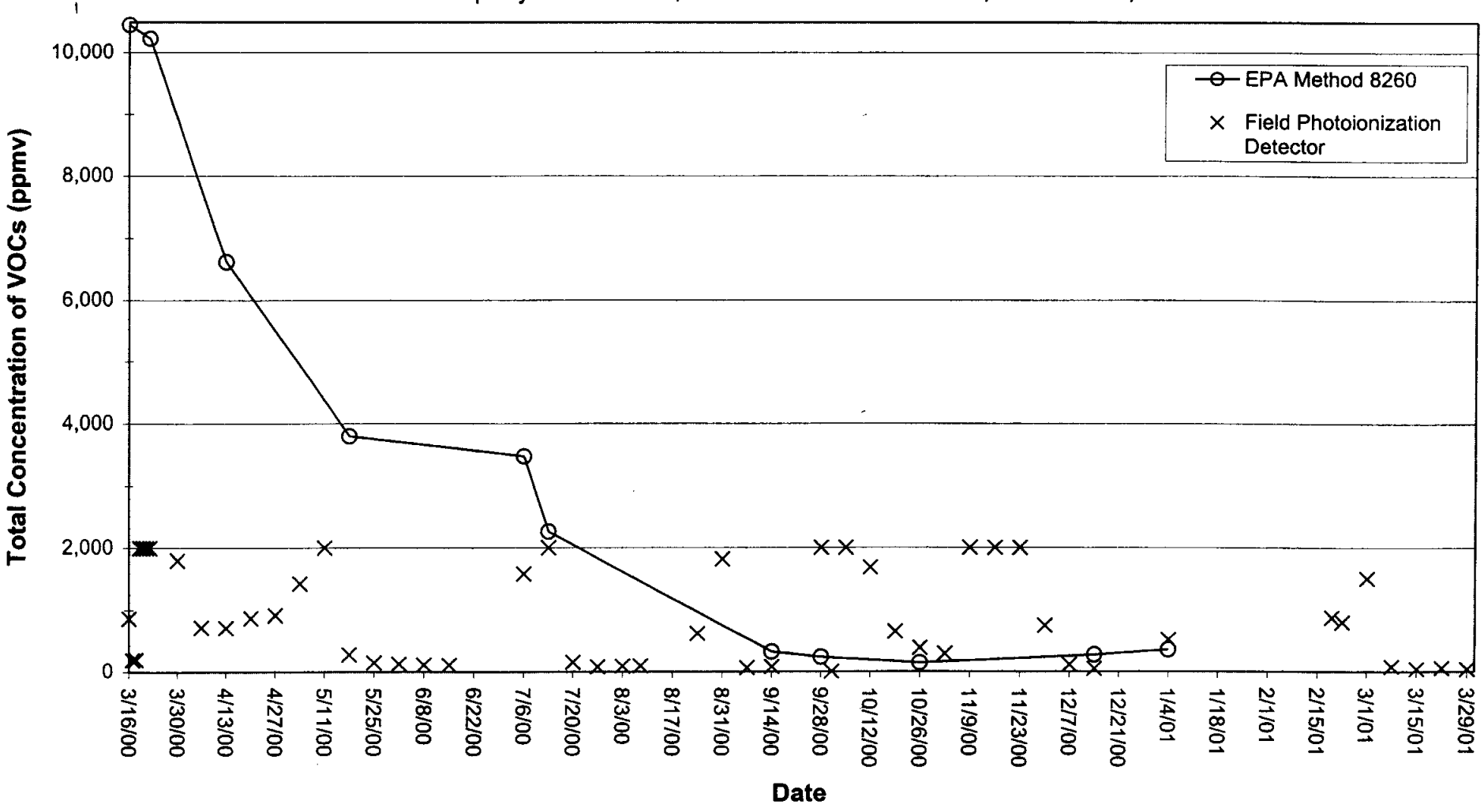
000672

FIGURE 9b

Total Concentrations of VOCs versus Time : Extraction Well SVE-1

Quarterly Progress Report for January through March 2001

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California



EKI 991103.01
2001-Q1 Table 4 & Figure 9

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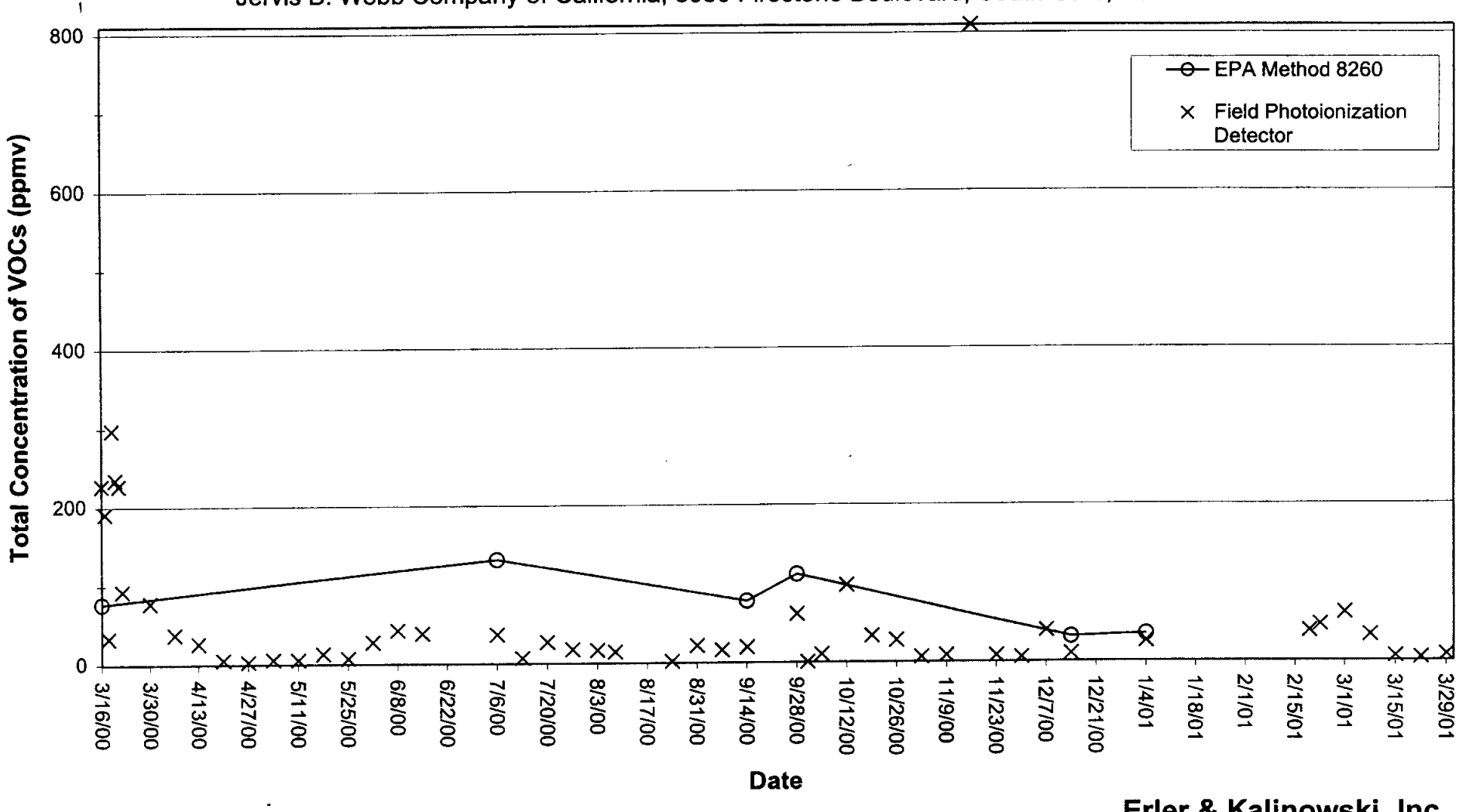
000673

FIGURE 9c

Concentrations of Total VOCs versus Time: Extraction Well SVE-2

Quarterly Progress Report for January through March 2001

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California



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EKI 991103.01
2001-Q1 Table 4 & Figure 9

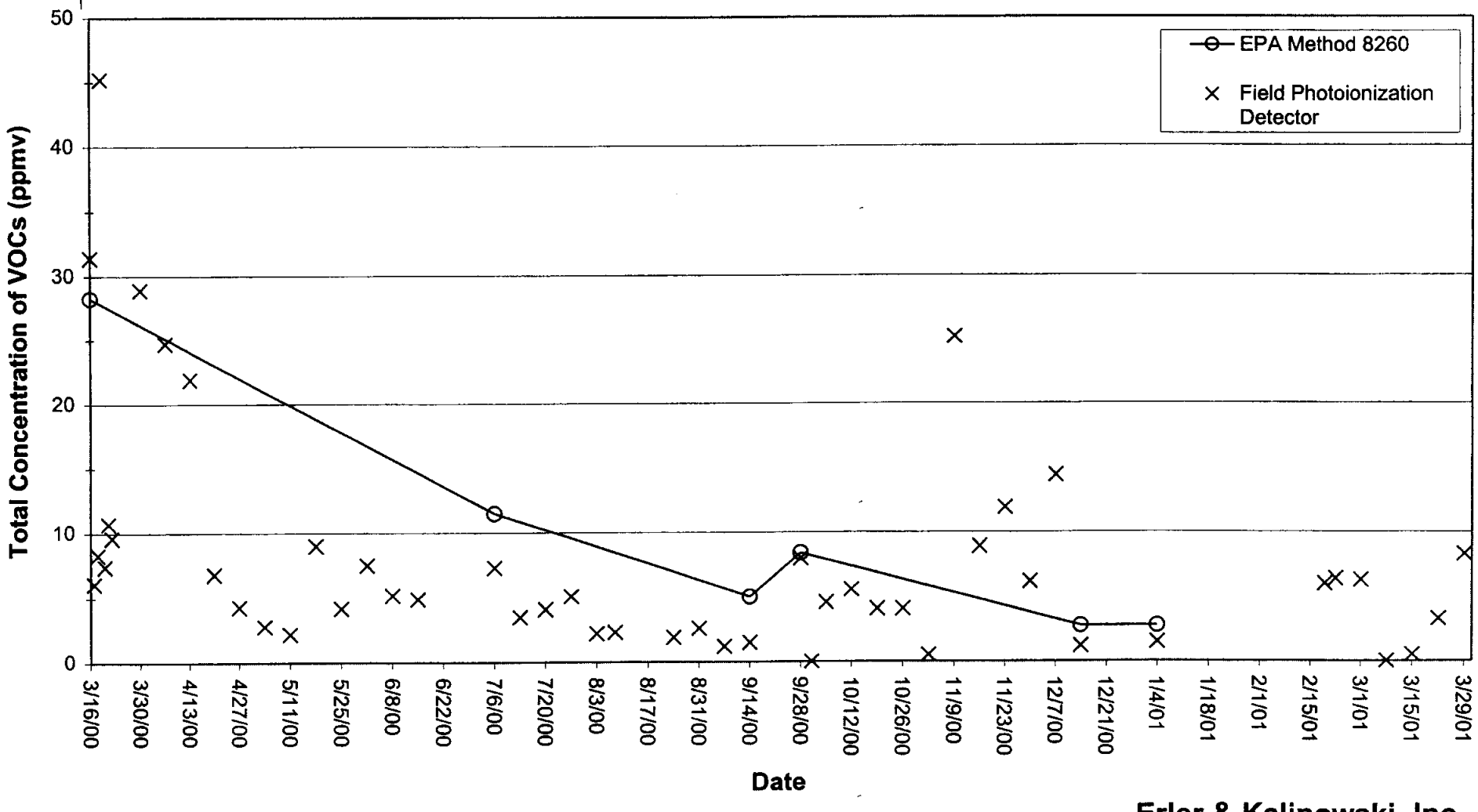
000674

FIGURE 9d

Concentrations of Total VOCs versus Time: Extraction Well SVE-3

Quarterly Progress Report for January through March 2001

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California



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EKI 991103.01
2001-Q1 Table 4 & Figure 9

30 April 2001

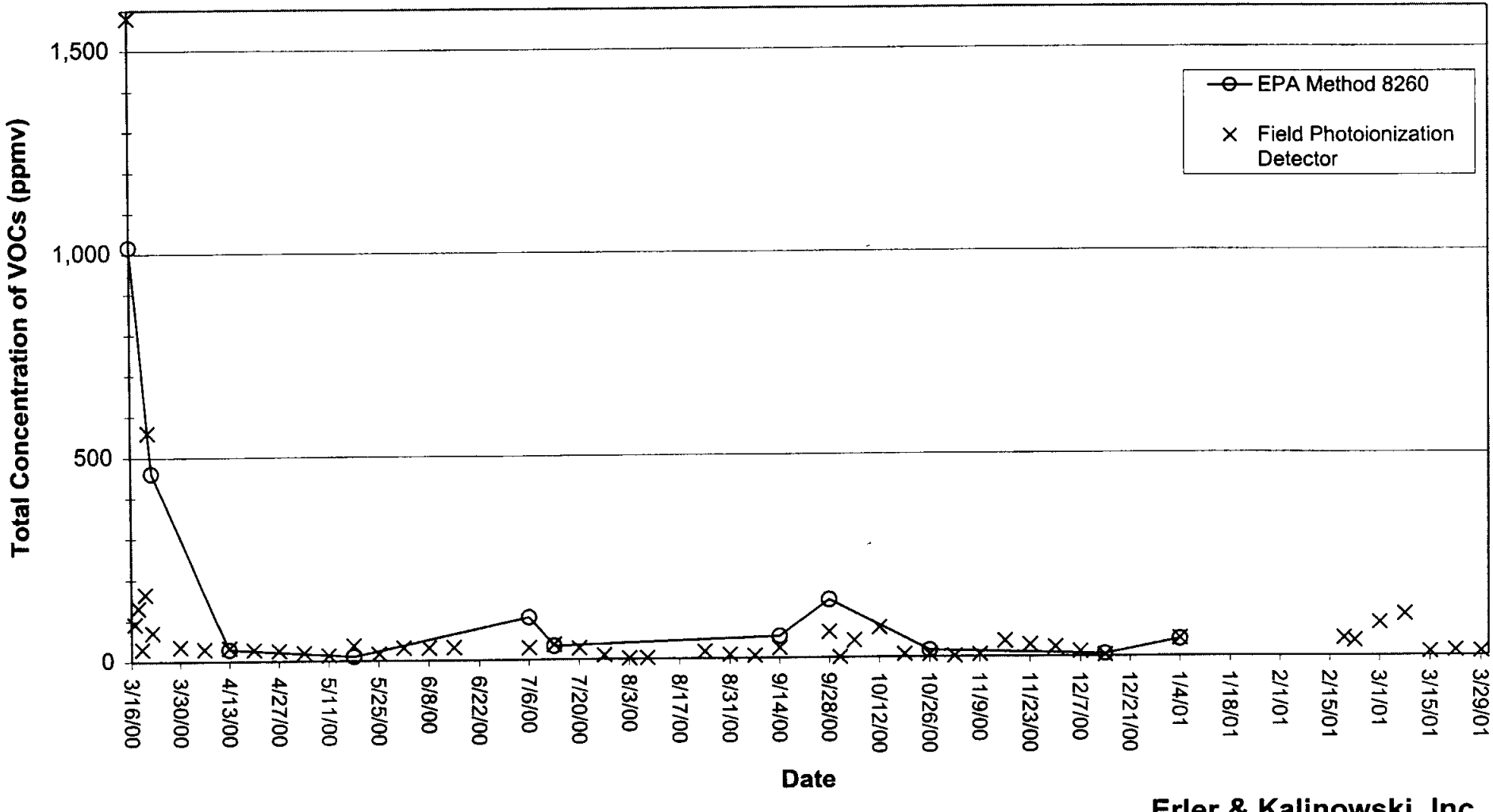
000675

FIGURE 9e

Concentrations of Total VOCs versus Time: Extraction Well SVE-D1

Quarterly Progress Report for January through March 2001

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California



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EKI 991103.01
2001-Q1 Table 4 & Figure 9

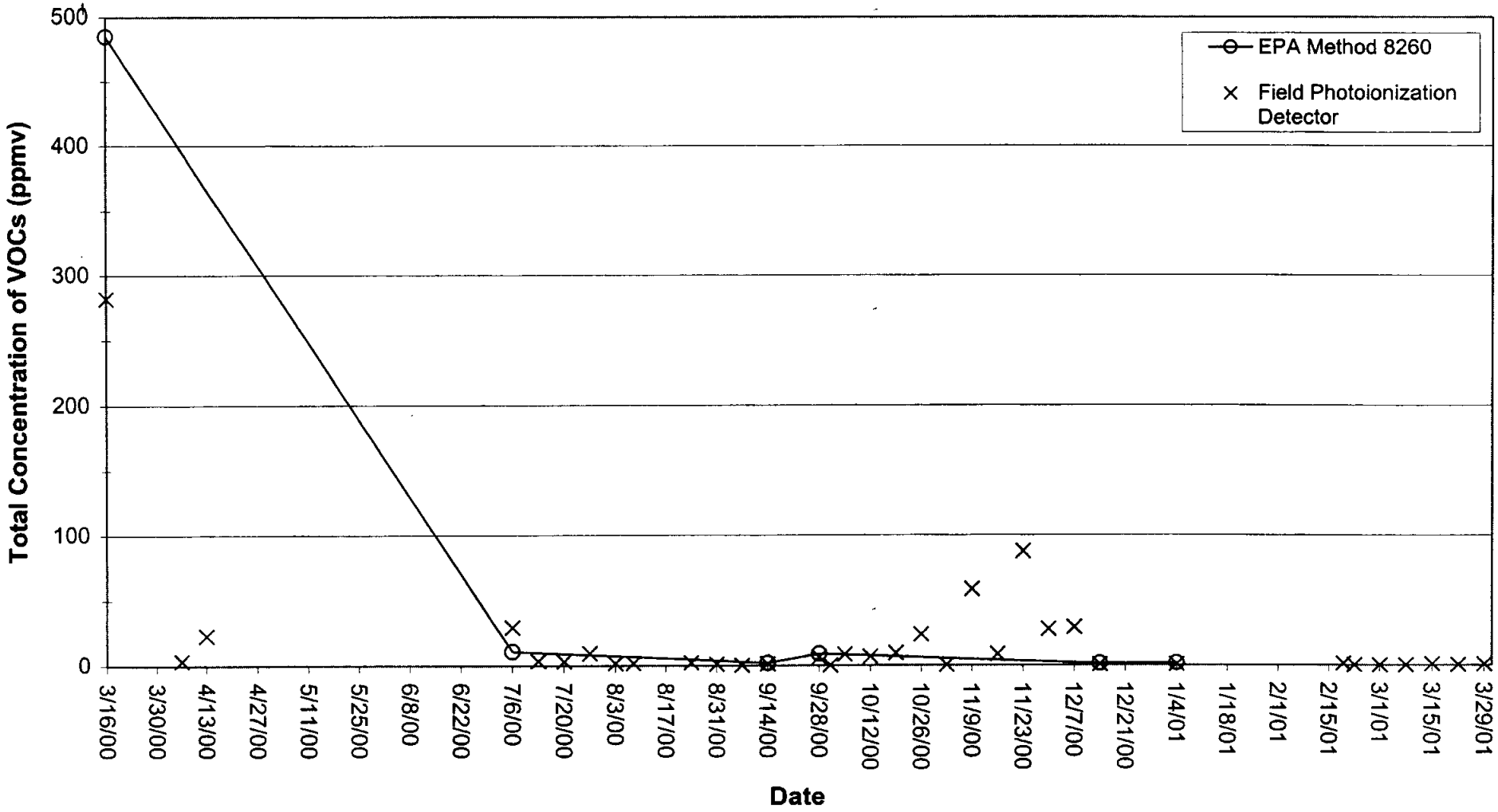
000676

FIGURE 9f

Concentrations of Total VOCs versus Time: Extraction Well VMP-D1

Quarterly Progress Report for January through March 2001

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California



EKI 991103.01
2001-Q1 Table 4 & Figure 9

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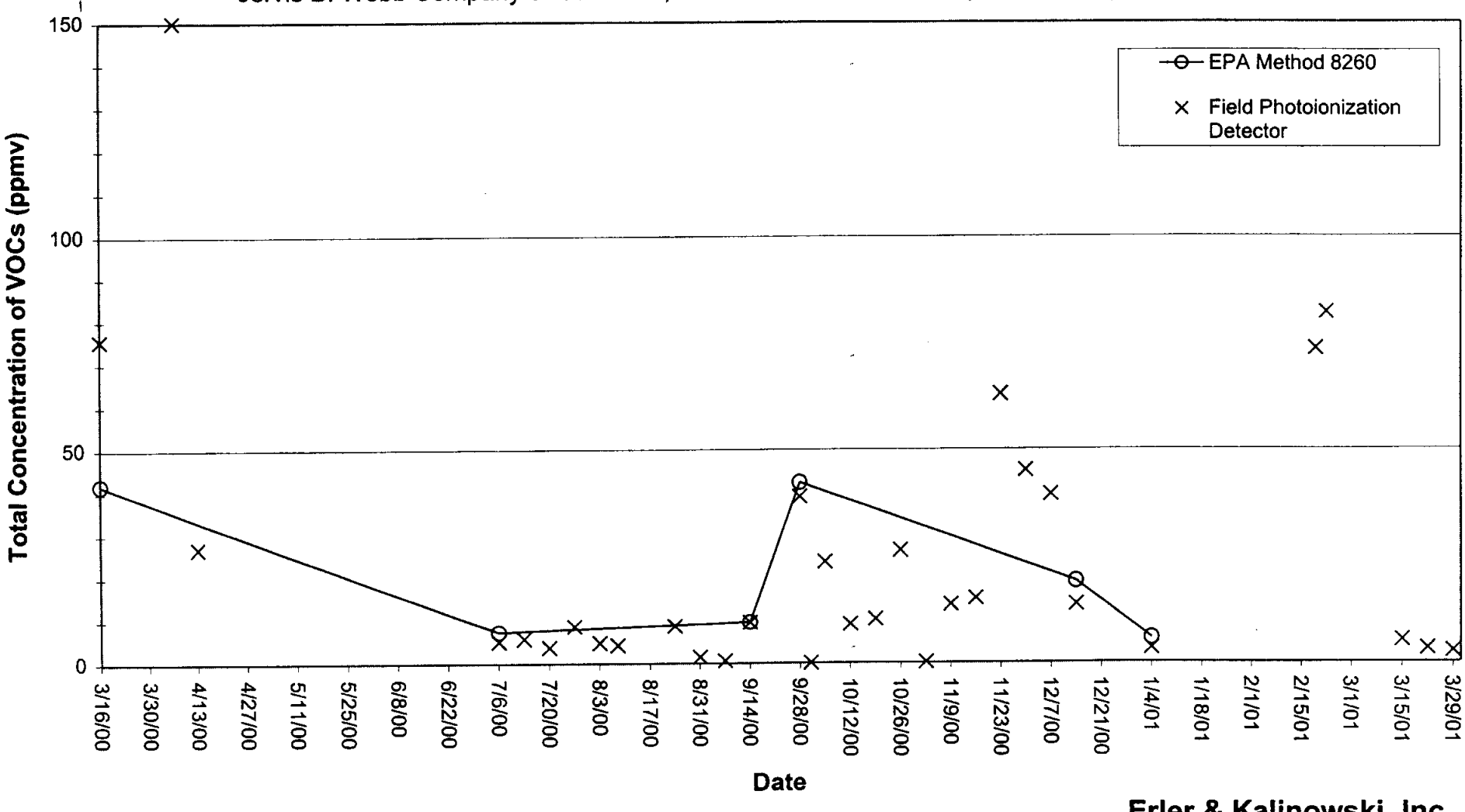
30 April 2001

FIGURE 9g

Concentrations of Total VOCs versus Time: Extraction Well VMP-D2

Quarterly Progress Report for January through March 2001

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California



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EKI 991103.01
2001-Q1 Table 4 & Figure 9

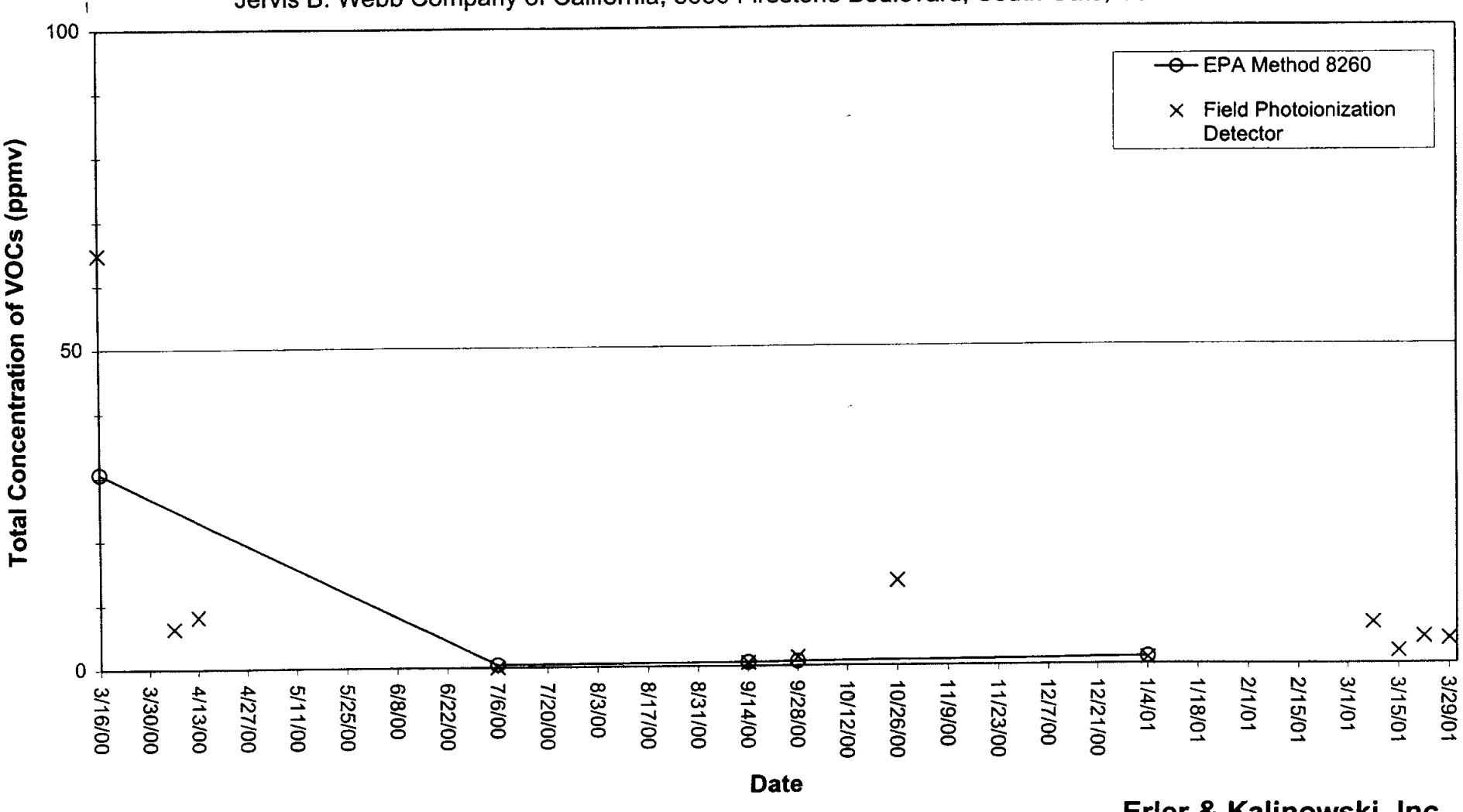
000678

FIGURE 9h

Concentrations of Total VOCs versus Time: Extraction Well VMP-1

Quarterly Progress Report for January through March 2001

Jervis B. Webb Company of California, 5030 Firestone Boulevard, South Gate, California



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EKI 991103.01
2001-Q1 Table 4 & Figure 9

000679

APPENDIX
D

91B-2-99

APPENDIX D

CALCULATION OF VOC MASS IN SOIL

SOIL CONTAMINATION CALC ULATIONS									
TCE contamination									
major axis (ft)	minor axis (ft)	Area (ft^2)	H1(ft)	H2 (ft)	V	Soil Mass(lbs)	Soil Mass (kg)	Avg. contamination (mg/kg) *	Contamination(lbs)
51	34	5447.517	18	6	48367.92	5320471.16	2413325.12	0.12	0.637117833
32	26	2613.803	18	6					
32	26	2613.803	46	18	43630.4	4799344.211	2176945.92	27.00	129.3105874
16	10	502.6544	46	18					

Total TCE (lbs)= 130

PCE contamination									
major axis (ft)	minor axis (ft)	Area (ft^2)	H1(ft)	H2 (ft)	V	Soil Mass(lbs)	Soil Mass (kg)	Avg. contamination (mg/kg) *	Contamination(lbs)
51	34	5447.517	18	6	48367.92	5320471.16	2413325.12	0.29	1.539701429
32	26	2613.803	18	6					
32	26	2613.803	46	18	43630.4	4799344.211	2176945.92	9.50	45.49816963
16	10	502.6544	46	18					

Total PCE (lbs)= 47

Total Contamination (lbs)=	176.9855763

Effective 5/31/01